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ESTABLISHED IN 1861
THE AMERICAN
BEE JOURNAL
OLDEST BEE-PAPER IN AMERICA

Vol. XXVII. CHICAGO, ILL., JANUARY 1, 1891. No. 1.

OLDEST BEE PAPER IN AMERICA
THE AMERICAN
BEE JOURNAL
ESTABLISHED IN 1861

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THOMAS G. NEWMAN & SON
At One Dollar a Year.
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Always State the Post-Office to which your paper is addressed, when writing to us.

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Rates to Dealers. — On 10 or more copies, 25 per cent. discount, including the postage. If the dealer pays the transportation, 40 per cent. discount will be given.

Bees and Honey, or Management of an Apiary for Pleasure and Profit, by Thos. G. Newman. 250 pages—245 illustrations. Price, in cloth, $1.00.

Bienen Kultur, by Thomas G. Newman. This is a German translation of the principal portion of the book called "Bees and Honey." 100 pages. Price, 40 cents. Per dozen, $3.00.

The Apiary Register, by Thomas G. Newman.—A Record and Account Book for the Apiary, devoting two pages to each colony. Leather binding. The price for 50 colonies is $1.00. For 100 colonies, $1.25; 200 colonies, $1.50.

Bee-Keepers' Convention Hand-Book, by Thomas G. Newman.—It contains the Parliamentary Law and Rules of Order for Bee-Conventions—also Constitution and By-Laws, with Subjects for Discussion. Price, 50 cents.

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Leaflet, No. 1. — Why Eat Honey? Intended for FREE distribution in the bee-keepers' locality, in order to create a Local Market. Price, 100 copies, 50 cents; for 500, $2.00; for 1,000, $3.25.

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The Preparation of Honey for the Market, including the production and care of Comb and Extracted Honey. A chapter from "Bees and Honey." Price, 10 cents.

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The Hive I Use, by G. M. Doolittle.—It details his management of bees and methods for the production of honey. Price, 5 cents.

Dictionary of Apiculture, by Prof. John Phin. Gives the correct meaning of nearly 500 apicultural terms. Price, 50 cents.

How to Propagate and Grow Fruit, by Chas. A. Green.—It contains over 50 illustrations and two large, colored fruit plates. It tells how to propagate strawberries, raspberries, blackberries, currants, gooseberries, grapes, quinces, peaches, apricots, plums, cherries, pears and apples, with cuts showing how to bud, graft and propagate from layers, etc. Price, 25 cents.

A B C of Carp-Culture, by Milton P. Pierce.—It is of great value to all interested in carp-culture. 100 pages. Price, 40 cents.

Foul Brood, by A. R. Kohnke.—Origin, development and cure, as taught by the most noted apiarists in Germany. Price, 25 cents.

Practical Hints to Bee-Keepers, by C. F. Muth, on bees and foul brood. Price, 10c.

Dzierzon Theory. — The fundamental principles of apiculture. Price, 15 cents.

Comb Honey, by W. Z. Hutchinson.—His method for its Production. Price, 25 cents.

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Scientific Queen-Rearing, by G. M. Doolittle.—It details his experiments in the rearing of Queen-Bees. Price, $1.00.

Pocket Dictionary. — Always useful, and often indispensable. Price, 25 cents.

Kendall's Horse Book.—35 engravings —illustrating positions of sick horses, and treats on all diseases. Price, English or German, 25 cents.

Hand-Book of Health, by Dr. Foote. —Hints and information of importance concerning eating, drinking, etc. Price, 25 cents.

Turkeys for Market and Profit, by Fanny Field, the most experienced turkey-rearer in America. Price, 25 cents.

Lumber and Log Book.—It gives the measurements of all kinds of lumber, logs, planks; wages, etc. Price, 25 cents.

Silo and Silage, by Prof. A. J. Cook.—It gives the method in successful operation at the Michigan Agricultural College. Price, 25 cents.

Cheshire's treatment of Foul Brood.—Its cause and Prevention. Price, 10 cents.

Honey as Food and Medicine, by Thomas G. Newman.—In French. Price, 5 cents.

Langstroth on the Honey-Bee, revised by Charles Dadant.—It is entirely re-written and fully illustrated. Price, $2.00.

Handling Bees, by Chas. Dadant & Son. —A chapter from Langstroth revised. Price, 8 cts.

Blessed Bees, by John Allen.—Full of practical information. Price, 75 cents.

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Quinby's New Bee-Keeping, by L. C. Root.—This is a new edition of Mr. M. Quinby's "Mysteries of Bee-Keeping," entirely re-written by his son-in-law. Price, $1.50.

A B C of Strawberry Culture, by Messrs. T. B Terry and A. I. Root.—It is for those beginning to grow strawberries. Price, 40 cents.

Historic.—A brief history of the North American Bee-Keepers' Association, and Reports of the first 20 Conventions. Price, 25 cents.

By-Laws.—For local Associations, with name of the Organization printed. $2.00 per 100.

Ribbon Badges for Bee-Keepers, upon which is printed a large bee in gold. Price, 10 cents each. Large ones with rosette, 50 cents.

How I Produce Comb Honey, by George E. Hilton; 3d edition. Price, 5 cents.

Maple Sugar and the Sugar Bush, by Prof. A. J. Cook. Price, 40 cents.

A B C of Bee Culture, by A. I. Root.—A cyclopædia of everything pertaining to the care of the honey-bee. Price, $1.25.

Bee-Keeping for Profit, by Dr. G. L. Tinker.—It fully details the author's new system of producing honey. Price, 25 cents.

A Year Among the Bees, by Dr. C. C. Miller.—Chat about a season's work. Price, 50 cts.

Bee-Keeping.—Translation of Dzierzon's latest German book. Price, $2.00; paper, $1.50.

Thirty Years Among the Bees, by Henry Alley. Price, 50 cents.

THE AMERICAN BEE JOURNAL
CIRCULATES
ALL OVER THE WORLD.
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVII. Jan. 1, 1891. No. 1.

Editorial Buzzings.

What shall the new year bring to thee ?
Silver and gold ?
Freedom from toil's grim bondage ?
Pleasures untold ?
Riches or love or laurels ?
What e'er to thy lot be sent,
God grant the new year'll bring thee
Peace and a heart content !

◆

"A Happy New Year" to you. Here we are, as bright as a new shining dollar, making our bow to you, dear reader. It is the same "old reliable" American Bee Journal, but in a new dress of beautiful clear type, and with words as cheery and hopeful as ever, ready to begin another year of toil, and to enjoy with you the sweet counsel which has existed for over 17 years. Here is our ☞. Let us "shake," and journey on together for another year.

◆

To Show Appreciation for the good work we have done in the past, please to call the attention of your friends to our Journal, and ask them to partake of the feast with you for 1891.

1891.—It is 30 years ago to-day since the American Bee Journal was born—the first issue bearing date of January, 1861. Then it stood alone, as the only representative of apicultural literature—now it has many companions and helpers. On this, its 30th natal day, it salutes them all, as a parent caresses children, wishing them wealth and prosperity.

◆

White Clover Honey is now in good demand almost everywhere.

◆

Now is the time to join the National Bee-Keepers' Union. Send to this office for the necessary Blanks.

◆

Correspondence on bee-matters is solicited. If you have anything worth writing about, send it along.

◆

The Character and labors of the Bee Journal for the past 30 years are the best guarantee we can offer for the future. The liberal patronage of the past, shows that our efforts have been appreciated. Such speak more eloquently than words can express.

◆

Several bee-periodicals have not put in an appearance at this office for months. What is the matter ? Are they among the dead or dying ? Among them we may mention the *Western Apiarian*, the Nebraska *Bee-Keeper*, and the White Mountain *Apiarist*. Send them along, friends, if they are still published. We want to review them all.

◆

Silo and Silage, by Prof. A. J. Cook, price 25 cents, is on our desk. It is a pamphlet of 50 pages, and nicely illustrated. More than 20,000 copies of it have been sold in less than two years. The Silo is a grand thing for the farmers. Prof. Cook has proved all that he states in his book, on his own farm. It is thoroughly practical, and every farmer should have a copy. It is for sale at this office.

That Incorporation.

The *Canadian Bee Journal* for Dec. 15, contains this item:

> There is every prospect of the North American (late International) Bee-Keepers' Association becoming an incorporated body under the laws of the State of Illinois, in which case we do not see how it can well be called an International body. Is there no law by which its incorporation can be had at the hands of Congress, thus making it more what its name signifies?

We know of no way to incorporate any society other than under State laws. Then the incorporated society can do business in any State, Territory or Province.

Many of the fraternal insurance societies are incorporated in Massachusetts, and then do business in every State, as well as Canada and other countries. They have local societies everywhere, and these form grand bodies in the different States or Districts, and send delegates to them. The grand bodies also send representatives to the supreme body, which holds its annual meeting in different States, as previously arranged. This is much like what is contemplated by the incorporation of the N. A. B. K. A.

Lest some may think that the editor of the AMERICAN BEE JOURNAL influenced the decision of the committee (he being a member) to have the Association incorporated in Illinois, we desire to say that we steadily voted for Indiana, because the Association was born at Indianapolis.

The other two members of the committee voted for Chicago as "the place of business," and, of course, that settled it. The Convention, when hearing the report, made no suggestion as to any other place, and then we said nothing to influence it, one way or another. We say this to prevent any feeling about its being incorporated in Illinois. We opposed its location before the committee solely to prevent jealousy and trouble. The Convention settled the matter, and we bow to its decision.

White Clover Honey gives the most universal satisfaction. It varies in tint from the pure white to amber, according to the locality where it is produced. That from hillsides varies in color from that in valleys. Atmospheric conditions, soil and climate have much to do with its tint. Basswood honey is white, invariably. A correspondent in the *Indiana Farmer* has this to say about it:

> I believe that white clover honey is best; not because it is the whitest, or has a better flavor; for to me basswood (linden) honey is the best flavored; and to others, raspberry, buckwheat, mangrove, orange, or some other honey is the best flavored. I have had hundreds of pounds of basswood honey that was whiter than any white clover honey I ever saw. But there is something in the composition of clover-honey that makes it more satisfying to the taste that I cannot describe, and is beyond the "ken" of science.

◆

The Minnesota Bee-keepers' Association holds its next annual meeting with the State Horticultural Society, in Minneapolis, on Jan. 21, 1891. Every bee-keeper in the State should give at least one day to this meeting, if he is unable to attend the entire session of the Horticultural Society.

◆

As Usual, Brother J. W. Winder, of Louisiana, has sent us a package of roses as a New Year's present from New Orleans. They bloomed out-of-doors, and their preserved fragrance filled the room when we opened the package. We hope Brother Winder may live to see many more "happy New Years," and also enjoy much fragrance from the beautiful flowers of "the sunny South." Thanks for the New Year's remembrance.

◆

How do You Like our enlargement, new dress and general make-up? The progress of the AMERICAN BEE JOURNAL has been steadily forward. The present improvement will give it increased popularity.

Ring Out, Wild Bells.

ALFRED TENNYSON.

Ring out, wild bells, to the wild sky,
The flying clouds, the frosty light :
The year is dying in the night ;
Ring out, wild bells, and let him die !

Ring out the Old, ring in the New :
Ring, happy bells, across the snow :
The year is going, let him go ;
Ring out the False, ring in the True !

Ring out the slowly dying cause,
And ancient forms of party strife,
Ring in the nobler modes of life,
With sweeter manners, purer laws !

Ring out false pride in place and blood,
The civic slander and the spite ;
Ring in the love of truth and right,
Ring in the common law of good !

The Honey Almanac for 1891.

This is now published and ready for delivery. All orders in waiting have been filled, and new ones are solicited. It is printed on larger and better paper than last year, and is otherwise improved, but the prices will remain the same as before. A single copy will be mailed to any address for a nickel.

Among its new and interesting features are a statement of the virtues of the use of honey in cases of that dreadful scourge—*La Grippe.*

Besides the new illustrated pages for each month of the year 1891, it contains a calendar for a-year-and-a-half, ending with June, 1892, and a lovely full-page illustration.

Apiarists as well as others may well ask : "Who made the first Almanac?" So far as we know, the first Honey Almanac was issued by us over a year ago, and we expect to continue it as the years come and go, for it has earned its right to exist by the good it has already done in popularizing the use of honey, and bringing to the notice of thousands its excellent qualities, both for food and medicine.

In discussing the question of "Who first began to use a calendar?" Faith Latimer makes the following very interesting remarks :

How did the old patriarchs reckon time? How did Methuselah know how to count his years and keep all his birthdays? The very earliest reckoning of time was night and day, from the darkness to the light, and the earliest that we know of counting the seasons was the promise to Noah that, while the earth remained, seed-time and harvest, cold and heat, Summer and Winter, should not cease.

Months naturally began to be counted by the changes of the moon. Do twelve moons make a year? Various nations have different times for the beginning of the year; the ancient Egyptians, Persians, Chaldeans, Syrians, and others began their year in what we call the month of September.

The ancient Jews began their civil year at the same time, but their religious year began in the Spring season. One of the oldest calendars in existence, except some dates cut on ancient stones, is one which was unburied at Pompeii. It is a square, with three columns on each of the four sides, each column, for a month, indicating the number of days, the length of day and night, and the holy or festival days in each month.

The Julian calendar, which was introduced by Julius Cæsar, first reckoned the year as having 365¼ days. This was 46 years before the birth of Christ. Popes and councils have differed, while astronomers studied and calculated, and the common people had to accept their decisions, for they knew very little about it. Years, leap years and centuries went passing by, and it was not until printing had been discovered, and reading become more general that a calendar or almanac would have been of any use in ordinary households. It is supposed that the Arabs first used tables which represented almanacs as astronomical guides.

In the British Museum are some manuscript almanacs of the 14th century. A German astronomer, Purbach, is said to have made the first printed almanac, at Vienna, in 1457. That was before this country was discovered. We now have calendars and almanacs for every purpose of information and advertising.

We Club the American Bee Journal and the Illustrated Home Journal, one year for $1.35. Both of these and Gleanings in Bee Culture for one year for $2.15.

The World's Fair.—The President has issued his proclamation to the Nations of the Earth, inviting them to the World's Columbian Exposition.

Our friends all over the World will now take due notice, and send or bring an exhibit of bees, honey, and bee-appliances, so that there may be the largest and grandest exhibit of such ever seen in the World.

The proclamation contains the following paragraphs:

> Now, therefore, I, Benjamin Harrison, President of the United States, by virtue of the authority vested in me by said act, do hereby declare and proclaim that such international exhibition will be opened on the first day of May, in the year eighteen hundred and ninety-three, in the city of Chicago, in the State of Illinois, and will not be closed before the last Thursday in October of the same year.
>
> And in the name of the Government and of the people of the United States, I do hereby invite all the Nations of the Earth to take part in the commemoration of an event that is pre-eminent in human history, and of lasting interest to mankind by appointing representatives thereto, and sending such exhibits to the World's Columbian Exposition as will most fitly and fully illustrate their resources, their industries, and their progress in civilization.

◆

The Demand for Honey exceeds the supply. There have been many inquiries of late at this office as to where comb-honey could be obtained. One person wanted a carload of white-clover honey. In Indianapolis the same state of affairs seems to exist. The *Indiana Farmer* says:

> Comb-honey here is being retailed at 25 cents per pound. The demand for extracted-honey seems to be mostly for the one-pound can. Evidently these cans have gained a reputation that has come to stay.

◆

Catalogues and Price-Lists for 1891, are received as follows:

G. B. Lewis Co., Watertown, Wis.—32 pages—Hives, Frames, Sections, etc.

S. F. & I. Trego, Swedonia, Ills.—6 pages—Italian Queens, Fowls, etc.

Echoes, a monthly heretofore published at Nevada, O., by Will M. Young, is dead. The editor, in his "valedictory," remarks as follows:

> Last January we had the pleasure (?) of an acquaintance with that world-renowned leech, the "grip," and it fastened itself to our anatomy with a tenaciousness that would be commendable in a worthy cause, and this insidious enemy of mankind refuses to "let go." We believe this Winter in the "sunny South" will bring us out "right side up," therefore we have made arrangements to sojourn in that Winter resort, Jacksonville, Fla., until about May 1, and will start about the middle of December.
>
> To our bee-keeping friends we will say: Whether we return North in the Spring to stay or not, we will not lose sight of the "busy bee." We expect to return to our home about May 1, and should we arrange to be absent the coming Summer, some one will have charge of our business here, and customers can get supplies as heretofore.
>
> The acquaintances we have made through *Echoes* have been pleasant, and we expected to widen, considerably, our circle of friends through the same medium had we continued it. We feel thankful, friends, for your favors, and now as the publisher of *Echoes* we bid you adieu.

◆

Some Expect to hear of heavy losses during the coming Winter; many colonies have gone into Winter quarters too light for safety, and will need feeding in early Spring.

◆

Mr. J. C. Swaner, of Salt Lake City, Utah, has sent us his photograph, and it is placed into the office album with thanks.

◆

Supply Dealers desiring to sell our book, "Bees and Honey," should write for terms before issuing their Catalogues.

◆

The Bee Belt of Colorado is that portion of the Bear Creek Valley in Jefferson County, lying between the towns of Morrison and Littleton. There are fully 2,500 working colonies of bees in the district named.

WINTRY BEAUTY.

REV. W. F. CLARKE.

The frost-magician, wand in hand,
Has been abroad, I ween,
And conjured up, o'er all the land,
A perfect fairy scene.

The trees are silvered o'er, each spray
Hangs thick with pearly gems,
And queenly nature wears to-day,
A thousand diadems.

My Norway hedge appears a wall
Of alabaster white,
And near the gate, the poplars tall,
Are glistering with light.

The separate balsams grandly rise,
Like emerald pyramids,
The color softened, as in eyes
Half hid by drowsy lids.

The earth is robed in dazzling white,
As though a bridal dress
Made all things passing fair and bright
With virgin loveliness.

Behind my lively steed I ride
Along transfigured ways,
A crystal pavement, far and wide,
Traversed by merry sleighs.

The Russian palaces of ice,
Alhambra's halls so fair;
And magic scenes, wrought in a trice,
Can scarce with this compare.

Each blade of grass is diamond-tipped,
A brilliant silvery sheen
Has changed the shrubs the frost had nipped,
To white instead of green.

The fences glitter in the sun,
All silvered o'er with ice,
Hung with festoons and fringes, done
In many a quaint device.

Lattice and fret-work interlace
The leafless forest trees,
And diamonds drop from dancing sprays,
Stirred by the passing breeze.

O'er all a sky of cloudless blue—
Bright sunshine all around—
When Spring shall Nature's face renew,
Will beauty more abound ?

O earth is lovely, even when
The wintry wind blows keen !
Beyond the power of tongue or pen
To paint the witching scene !
Guelph, Ont.

The Little Book, entited "Honey and its Uses," by Mr. J. Dennler, of Enzheim, Alsace, Germany, has reached its fifth edition. It is very similar to ours, entitled "Honey as Food and Medicine."

Indiana State Convention.

The 11th annual meeting of the Indiana Bee-Keepers' Association will be held on Friday, Jan. 16, 1891, at 1 p.m., at Indianapolis. The programme is as follows:

1. Roll call.
2. President's Address.
3. A general talk on the past season, opened by Geo. P. Wilson, of Toll-Gate.
4. An object lesson, with hive, showing how to manipulate the brood-chamber, the honey-board, and the section-case, in securing comb-honey—Geo. C. Thompson, Southport.
5. "Economy in bee-culture;" including a description of his excellent double-walled hive—Jonas Scholl, Lyons Station.
6. "Some of the observations and experiences of a Switz county bee-keeper"—Robert Scott, Moorfield. Mr. Scott keeps bees in a bee-house, and warms the house artificially about every ten days in severe weather.
7. "Bee sheds and houses—how to make and use them"—Joseph Myers, Gray.
8. "Management of an apiary to secure straight combs and extracted-honey"—Walter S. Pouder, Indianapolis.
9. "Italian bees, and the proper method of shipping them." A letter from ex-Gov. Porter, Minister to Italy.
10. "How far can the 'let-alone' policy be carried with fair success in handling bees?"—R. S. Russell, Zionsville.
11. "The machinery and raw material best suited to manufacturing supplies"—Geo. C. Kirkpatrick, Portland.

Mr. Pouder has kindly agreed to exhibit at the meeting all kinds of hive-fixtures and appliances known to bee-keepers. No where in the State can one learn so much about practical bee-keeping in so short a time as at this State meeting. One-and-one-third rates will be granted by the Central Traffic Association, and bee-keepers throughout the State are cordially invited to attend.

G. C. THOMPSON, *Sec.*, Southport, Ind.
E. H. COLLINS, *Pres.*, Carmel, Ind.

We are Sorry to learn that Mr. C. J. Robinson has had another visit from *La Grippe.* We can fully sympathize with him—having had it for over three months last Winter.

Wavelets of News.

Good-By, Old Year.

Good-by, Old Year, good-by !
With all your many cares !
With all your hopes and fears !
With all your joys and tears !
Good-by, Old Year, good-by.

We do not bid thee stay,
To us thou didst not bring
So many a joyous thing,
That we to thee should cling,
The past is gone to-day.
—*Dairy Journal.*

Honey as Medicine.

The public are waking up to the importance of honey as a remedy for ills that flesh is heir to. A boy comes regularly to our honey-house, saying, "I want some more honey for father." He says that honey is the best medicine for his lungs that he has ever had. Honey is in demand for the baby's sore mouth, sister's throat, and mother's cough, etc. --*Mrs. L. Harrison in Prairie Farmer.*

Birthday Celebration.

The American Bee Journal celebrates its 30th anniversary with the opening of the coming volume, in January. It was started as a small monthly, octavo size, the first volume which we have. Now it is a quarto weekly of 16 pages ; but Brother Newman announces in a late number that this excellent journal is to be enlarged to 32 pages weekly. It goes without saying that its present high standard—which is high enough—will be maintained.—*Lewiston, Maine, Journal.*

Different Races of Bees.

Dalmatian bees are easy to manage, and excel in making comb-honey. The Hymettus bees of Attica are much like Carniolans except in disposition. Palestines come from the Holy Land, and are often confused with Syrians, to which they are inferior. They use more propolis than any other variety, and are troubled with more laying workers, but are said to be even more beautiful than Cyprians. Egyptian bees, found in Egypt, Arabia, and Asia Minor, have yellow bands, and are smaller than Italians. Although they have long been domesticated in Egypt, where floating apiaries were common, they have been found vicious by European bee-keepers who introduced them. Their cells are smaller than those of other species. Some naturalists believe yellow bees originated from them instead of from Syrians.—*Farm Life.*

Cuban Honey Yields.

From news which comes to us from Cuba, it is a wonderful honey country. The flow begins in December and lasts until May, and does not entirely cease at any season of the year. The honey produced is mainly extracted, of good quality for Southern honey, and sells at from 50 to 70 cents per gallon in New York city. The yields reported are some of them very large, as much as 150 to 200 pounds per colony, from apiaries ranging from 460 to 500 colonies.—*Rural Homes.*

Good Air and Good Honey.

My advice for ladies who are but sickly house-plants, is to engage in something that will call them outside into the bright sunshine. I know of nothing better calculated to interest and instruct, and at the same time to remunerate for labor bestowed, than bee-keeping and poultry-raising combined.

You cannot keep bees intelligently without becoming enthusiastic. It awakens a new field of thought never before dreamed of. It changes the despised weed into the wonderful honey-producing plant.

Take, for instance, the hoarhound ; put the tiny flower under the magnifying-glass, and look at its wonderful structure and marvelous beauty ! From this source alone, last year, my bees gave me a ton of honey !

Just for a moment think how much honey goes to waste each year for want of bees, intelligently managed, to gather it ; and how many poor little children never so much as get a taste of the delicious, God-given sweet !

In the name of humanity, come outdoors, and help me work with the bees. I, too, used to be dyspeptic ; did not know for years what it was to feel well. I have lived for months at a time on two scant meals a day, and that, too, when I had plenty. Now I believe I am considered the most robust woman of our town.

Thanks to active out-door exercise, and constant use of honey, for my good health, which I prize more highly than any other earthly blessing.—*Texas Farm and Ranch.*

The Funny Side of Bee-Keeping.

In our rambles among bee-keepers we find them a great deal like other mortals; made up of various emotions, and whenever we meet a number of them they are an agreeable and jolly crowd. Shall we so conduct our journal as to touch the various emotions, or touch only one, and that the bee-keeping taste? In other words, shall we make our bee paper especially for the bee-keeper of the family, or shall we make it distinctively a bee paper, but edit it in such a way as to interest the whole family? When a bee-keeper loses all of his bees and takes up some other occupation, but still subscribes for the bee paper, you may be sure that it interests the whole family. In the apiary are many humorous happenings. Shall we say anything about them in the bee paper, or shall we tell them to an unappreciative audience in *Puck* or *Judge?*—Rambler in the *Review.*

Watering-place for Bees.

I use a 10-gallon keg: bore a hole near the bottom, put in a faucet, then take a soft pine board about 2 ft. long, and with a hatchet I hack it all over on one side to make it as rough as possible. Set the keg on a block (a box will do) about 18 inches high. Now place one end of the board just beneath the faucet, and the other end in a very small trough. Fill up the keg; cover it well, so that no bees may fall in; turn the faucet so that it will drip just to suit. With this arrangement near, they do not trouble me much in the watering-trough, except on a very hot day, when a little coal-oil rubbed in the trough just above the water will keep them away. They will not go into a trough that is painted with coal tar inside.—Ed. E. Smith in *Gleanings.*

Two Boys and a Large Fire.

We have succeeded in arresting the boys who set fire to our shops last Spring. There were 2 of them. One is now at the State Industrial School at Waukesha. He made a full confession; and as soon as the other boy was arrested he also confessed, telling the same story as the boy at Waukesha. They say they simply wanted to see a great fire. One is 11 years of age, and the other is 13. I am very glad to know how the fire started, and to know it was not done through any enmity.—G. B. Lewis & Co., in *Gleanings.*

Life Members.

New life-members are being continually added to the roll of the North American Bee-Keepers' Association, and so far we feel very much encouraged; and if this membership is to continue at the present rate, we shall keep on harping until the list is swelled to a respectable size.

Up to the date of the meeting at Keokuk, these two were the only life-members: D. A. Jones, Beeton, Ont.; Thomas G. Newman, Chicago, Ill.

The following is the list of names that have been handed in since, in the order of their receipt: A. I. Root, Medina, O.; E. R. Root, Medina, O.; J. T. Calvert, Medina, O.; Charles Dadant, Hamilton, Ill.; Eugene Secor, Forest City, Iowa; Dr. C. C. Miller, Marengo, Ill.; O. R. Coe, Windham, N. Y.

We trust that every bee-keeper who is interested in the highest welfare of his pursuit will at once send his name to the Secretary, Mr. C. P. Dadant, Hamilton, Ill. If you are unable to pay the amount now he will charge the same to you, and you will then be enrolled in the list as above. The above makes 10 names, and all that has been paid in is invested, and drawing 6 per cent interest.—*Gleanings.*

Preparing Bees for Winter.

The two most important points for successful wintering are, first, a rousing strong colony. Here is where the beginner is so liable to make a mistake by dividing until he has a number of weak colonies. Colonies that are not strong should be united rather than attempt to winter them separately. Before uniting them the poorest queens should be disposed of, and then allow the colony to remain quietly four or five days, after which the bees can be brushed off from the combs, in front of another colony, and by the aid of a little smoke they will become peaceable, hard-working citizens.

The second important point is to see that each colony has an abundance of stores. Each comb should be at least one-third filled with capped stores. Bees often starve to death in the midst of plenty; they consume the stores within their cluster, and as they cannot move to the adjoining combs during zero weather, they starve. Probably more bees perish from this cause, during the Winter season, than from all other causes combined.

Happily, by a little painstaking, we can apply the remedy. Confine the bees on five or six combs, with the aid of a division-board, removing the combs that contain the least stores. If you have an extractor, you can extract the honey from these, and feed it back to the colony; but if you have no extractor, take good care of the surplus combs and honey, for next season's use, and feed the colony syrup.

Some recommend cutting holes in the combs to allow the bees to pass readily from one comb to another. I much prefer two or three sticks laid across the top of the frames, to hold the cushion up, which will have the desired effect.

Spread a piece of burlap over the frames, and fill the upper story and the space at the side of the division-board, with chaff or cut straw.

Do not, by any means, attempt to feed your bees in the open air. It will attract all the bees in the neighborhood, and break up in a general "scrap" amongst the bees.

Do not allow one drop of honey to be exposed to the bees, if you want to prevent robbing; keep a basin of water and a towel in the yard. Contract the entrance to about one inch now, but during the Winter months remove the entrance blocks entirely, for it is a well-established fact, amongst our most successful apiarists, that the combs keep drier, and the bees winter better with the entrance wide open.—*Walter S. Pouder, in the Indiana Farmer.*

Bees as Protectors.

In a fight they come out best every time. Whole armies and flotillas have been vanquished by these little foes. Peddlers, tramps and book agents leave on the double-quick when they treat bees uncivilly.

Our peach trees bore sparingly this season, as the frost on the fith of May thinned them; what fruit there was being very large and fine. Thievish boys looked at them longingly, but there were those terrible bees underneath, and the peaches were left undisturbed.

Luscious Catawba grapes hung temptingly before the eye, but there was no one brave enough to face the music of humming bees.

Our Southern friends who raise watermelons, which are such a temptation to plantation negroes, should take the hint and place hives of bees among their melon vines. None of the woolly heads would venture there, no matter how thirsty they might be.—*Mrs. L. Harrison in the Prairie Farmer.*

The Standing Frame.

Captain Hetherington has from 3,000 to 4,000 colonies of bees, while P. H. Elwood, also of Otsego county, N. Y., and formerly his partner, has 1,300. They use the Quinby hive with the closed end standing frame. Many others in New York State, having from 400 to 500 colonies, use either this frame or the Hoffman partly closed end hanging frame.—*Farm and Home.*

Extracted=Honey is said to be gaining in favor in England. In our opinion it is only a question of time when the demand for comb-honey in this country will be less than at present. The buyer not only gets more honey when purchasing extracted-honey, even were the price the same, but avoids eating the wax, which is quite an annoyance to some.—*Exchange.*

I Expect to Pass through this world but once. If, therefore, there be any kindness I can show to any fellow-being, let me not defer or neglect it, for I will not pass this way again.—*Quaker Saying.*

Convention Notices.

☞ The Annual Meeting of the Ontario Bee-Keepers' Association, will be held in the city of St. Catharines, on the 7th and 8th of January. All interested in bee-keeping are cordially invited to attend.
W. COUSE, Sec., Streetsville, Ont.

☞ The Annual Meeting of the Indiana State Bee-Keepers' Association, will be held in the Agricultural Rooms. State House, Indianapolis, Jan. 16, 17, 1891. GEO. C. THOMPSON, Sec., Southport, Ind.

☞ The Annual Meeting of the Colorado State Bee-Keepers' Association, will be held Jan. 19, 20, on the Cor. 14th and Larramee Sts., Denver. The first session will begin promptly at 10 o'clock on the morning of the 19th. All interested in bee-keeping, especially strangers, are cordially invited to be present, and assist in the exercises.
E. MILLESON, Pres., Box 2522, Denver, Colo.

☞ The 22d Annual Meeting of the New York State Bee-Keepers' Association. will be held in Agricultural Hall. Albany. N. Y., on Jan. 22-24, 1891. Reduced Railroad Rates. Pay full fare to Albany, and we will give you return certificates over any road coming into Albany (except the Boston & Albany) at one-third of the regular fare. A cordial invitation is extended to all. Come and bring your friends with you. A complete programme will be published as soon as completed.
GEO. H. KNICKERBOCKER, Sec., Pine Plains, N. Y.

☞ The Annual Meeting of the Ohio State Bee-Keepers' Association, will be held in Toledo, O., on Tuesday and Wednesday, Feb. 10 and 11, 1891. Full particulars as to railroad and hotel rates, and place of meeting, will be given later. Let all interested in bee-keeping make an extra effort to be present on this occasion.
MISS DEMA BENNETT, Sec., Bedford, O.
DR. A. B. MASON, Pres.

☞ The Convention of the Eastern Iowa Bee-Keepers, will be held in the Dobson Town Clock Building, at Maquoketa, Iowa, Feb. 11, 12.
FRANK COVERDALE, Sec., Welton, Iowa.

☞ The 8th semi-annual meeting of the Susquehanna County Bee-Keepers' Association will be held at Montrose, Pa., on Thursday, May 7, 1891.
H. M. SEELEY, Sec., Harford, Pa.

Queries and Replies.

Clipping the Wings of Queens.

Query 746.—Please give your method of clipping the wings of queen-bees.—Lewis.

I let them be.—J. M. Hambaugh.

I clip all queen's wings in my mind.—H. D. Cutting.

I do not clip the wings of queen-bees. —J. P. H. Brown.

We do not clip the queen's wings, but if it is thought necessary, clip the tip of both wings.—Dadant & Son.

O my! I always have the "buck ague" when I attempt it. Ask some one else.—Mrs. L. Harrison.

I catch the queen by the wings with the right hand, then with the left by the upper portion of the body and clip three-fourths of one of the large wings.—P. L. Viallon.

My way of clipping a queen's wings is not to clip them at all. The queen and drone trap has made this a proceeding worse than useless.—C. H. Dibbern.

Catch the queen by the wings, hold her by the head and thorax, between the thumb and fingers of the left hand, and cut off both wings on the left side with a pair of lace scissors.—C. C. Miller.

With scissors in one hand take the queen by the thorax with the other, picking her up "head first" and then "clip." To catch her in a piece of netting is also a good way, as her wings will come through.—James Heddon.

I never clip queens' wings, so I have no method; but if I wanted to clip them, I should just do it, and let it go at that, using a pair of sharp scissors.—J. E. Pond.

Take the wings between the thumb and forefinger of the left hand, place the blade of the knife (held in the right hand) on the wings, lower both hands close to the tops of the frames, and draw the knife until the queen falls. Have the blade of the knife very sharp. There will be no danger of cutting your fingers if you stop as soon as the queen falls. —G. M. Doolittle.

I hold one wing between the thumb and forefinger of my left hand, let the queen cling to the end of my middle finger, and with a pair of pocket-scissors clip off about one-half of the large or front wing on the opposite side. I then put the queen on the comb whence it was taken, and return it to the hive.—M. Mahin.

I catch the queen by the wings with the left hand. Then place her so that she rests on something with her feet, then by the use of the right hand clip her wings. I sometimes clip her wings as she walks on the comb, but it takes more time than to catch her, and I never lose queens when I catch them. The bees receive them all right when returned.—A. J. Cook.

Of late I hold the frame with the queen on in one hand, or rest one corner on something, and with the other hand (using a small pair of sharp pointed scissors) follow the queen as she walks over the comb, gently slipping one point under a wing, and clip it off without touching her with my fingers. If your hand is steady it is easily done.—Eugene Secor.

Take the queen up from the comb by the wings with the right hand. Then transfer to the left hand, placing the chest of the queen between the thumb and forefinger. With a pair of sharp pointed scissors clip one of the large wings lengthwise, taking off a little more than one-half of the feather edge. I regard the clipping off of one or both wings to mere stumps, as not only brutal, but decidedly bungling.—G. L. Tinker.

I seize the queen by the wings with the forefinger and thumb of my right hand, and sitting down I let her lay hold of the knee of my trousers with her feet, when I hold her gently by the thorax with the forefinger and thumb of my left hand, keeping her on my knee, and clip with my right hand, with a small scissors.—R. L. Taylor.

I clip the wings of my queens as early in the Spring as the weather will admit of the bees gathering pollen. Equipped with a revoling frame-holder and a small pair of scissors I proceed as follows: After the hive is opened, and the queen is discovered, the frame on which she is found is hung on the revolving frame-holder, so as to have both hands free. The queen is picked from the comb by clasping her wings between the right thumb and forefinger. She is now shifted to the thumb and forefinger of the left hand, where her legs are gently, but firmly held fast, now wait a minute for her to stop her fluttering, then with the scissors clip off half of one pair of her wings. Now release her on the comb and wait until she becomes quiet before the frame is restored to its place in the hive. This precaution avoids all danger of "balling" of the queen. All persons who do not carry a *steady hand*, free from nervousness, had better let somebody else do the work. While holding a queen fast I have often seen danger of clipping off a leg, as she has a fashion of manipulating her supple limbs peculiar to her race. It is well to be on the lookout for a legerdemain sweep of a leg when the scissors are ready to snip off a wing.—G. W. DEMAREE.

Urgent Questions.

Queenless Colony.

I have one strong colony of Italian bees which drew out the queen dead on Dec. 11. What is best to do with it? Shake the bees off the frames on the first fine day we have in front of other colonies? or let them remain until I can furnish them a frame of brood? They are having a fine flight to-day, and it is very warm here. JOHN SUNDERMANN.
Huntington, Ind., Dec. 14, 1890.

[It will be useless to give the queenless colony a frame of brood until there are drones in the Spring, or at least until the drone-brood is capped. If the circumstances will permit, it would be desirable to unite the bees with a colony having a good queen. If not, then you will have to risk their wintering without a queen. —ED.]

Feeding Bees in the Cellar.

Some of my neighbors have several colonies of bees that are nearly destitute of stores, can such colonies be fed with any certainty of success in the cellar? If so, give the *modus operandi*.
C. P. MCKINNON.
Bangor, Iowa, Dec. 15, 1890.

[The feeding should have been done in the Fall, when the bees would have capped it over. Now, it will be more risky. Sugar-candy may be placed over the frames, or sugar syrup be given in an inverted bottle, (with cloth tied over the mouth), and placed over the frames.

To make the candy, use 4 parts of coffee A sugar and 1 part of water; simmer until it becomes quite hard on being cooled, mold it into frames 1 inch thick, and lay it over the frames, using sticks (½ inch square) underneath. Or you can mold it into brood-frames, tying hemp twine around the frames to hold the candy in place, and put it into the centre of the brood-chamber.—ED.]

Bee-Hives for all Purposes.

I am, to use a Western phrase, a "tenderfoot" in the bee-business. Although I had kept bees in 1857 and 1870, in the Spring of 1890 I began again by buying 2 colonies, which increased to 8, one of which escaped to the woods during swarming, and on the last of August I bought 5 late swarms. By feeding these I have been able to put all my bees into the cellar for Winter in a good condition, yet, in the late swarms there seems to be a great many of them dead. I use the 10-frame Langstroth hives. What kind of hives are best for general use? I want to use them for extracted and comb honey.
MARK D. J. WATKINS.
Osakis, Minn., Dec. 14, 1890.

[For a beginner there is no better hive than the one you are using—the Langstroth. Experts use others to suit their fancy and capabilities, but for all purposes (and for novices especially) the Langstroth is unsurpassed.—ED.]

Moving Bees.

I wish to move my hives about 400 yards from where they formerly stood. Will some one please tell me how to prevent the bees from flying back to the old place? I have been very much pleased with the BEE JOURNAL, and ILLUSTRATED HOME JOURNAL in the past, and when the announcement came that the former was to be enlarged and improved during the coming year, I wondered how it could be. Well! who can tell what stores of helpful knowledge one may find in these periodicals next year.
J. D. A. FISHER.
Faith, N. C., Dec. 20, 1890.

[Place a slanting piece of board on something over the entrances, so that when the bees come out, they will find something new, and then they will re-mark their location.—ED.]

Topics of Interest.

Locating Queens after Dividing Colonies.

G. M. DOOLITTLE.

With your permission, Mr. Editor, I wish to say something further on the question under the above heading found on page 677, which query is No. 733. The question reads "If a colony is divided equally, and no queen seen, is there positive evidence to the apiarist by observing, from the outside, which half has the queen? If so, what is it? Of the 17 who answer this question, including the editor, 13 say there is evidence, while 4 say there usually is no such evidence.

Well, if this testimony had been given before a judge and jury, it would be a strange thing if the case were not decided according to the testimony given by the 13; yet, here is one of the few cases where, I believe, the majority are wrong, and to show wherein they are wrong is the object of this article.

At the outset, I ask, What we are to understand by the word "colony," and what its condition at time of dividing? After answering "Yes, sir," Mr. Heddon goes on to state that he answers it from the standpoint of a swarm, while the question, as well as the import of the same, goes to show that a swarm was not meant at all but a full colony.

Swarms are not usually divided unless two or more go together, for it is a rare thing, indeed, to see a swarm of bees from a single hive which is too large to work to advantage. Hundreds and thousands are too small, to where one is too large; so this is another evidence that a swarm was not meant by the word "colony." Having decided that the person who asked the question knew what he was talking about, when he said "colony," the next point we wish to know, in order to answer his question intelligibly, is what he wished to divide his colony for. As a rule there is only one object in dividing a colony, and that object is to procure an increase without having to wait and watch for natural swarms.

All the bee-books tell us that the best, if not the only time, to divide for increase, is at about the time of natural swarming, either just a little before the honey harvest, or immediately after it; the former having, by far, the most advocates. Now if we divide at this time or times, in what condition do we find the colony?

If in a fit condition to divide, we shall have a hive full of bees and the combs filled with a little honey and much brood in all stages, so that in no case can either part, after division, be hopelessly queenless, and as far as my experience goes, it is a rare thing for bees to show this, "running around and flying from and to the hive" spoken of by the most of the 13 who answer the question in the affirmative, unless they are hopelessly queenless; and this was why I answered the question by saying, "Not usually."

In the last half of Brother Heddon's answer, where he interprets the question, as I consider rightly, it will be seen that he agrees with me when he says that a "queenless half will not act that way, provided they have plenty of young brood."

Mr. Mahin hits the nail square on the head in his answer by saying, "There is no evidence at all, provided both colonies have eggs and brood." If there are neither of these in any hive, whether divided or not, then the bees will show the restlessness spoken of by most of those answering in the affirmative; and this restlessness is so great that any one that looked at such a colony, only in a casual manner, could not help but notice that something was wrong.

When we come to take the queen away from a swarm or from any part of it, it cannot be kept in the hive at all, unless confined to the same, or unless brood in the unsealed form is given them, and it is often the case that they will return to their former location or to the parent colony even when unsealed brood is given.

A swarm without a queen is about the meanest thing to have anything to do with that I know of. Even if left on the old stand, they will scatter all about and try to go into any or all of the hives in the yard, raising a row generally.

Mrs. Harrison, in answering in the affirmative, gives a different view of the case from any of the other 13. While all the rest base their observations on the restless condition of the queenless part of the colony, she tells which part has the queen by its "greater activity."

We have been told for years that a colony having no queen will settle down into sluggishness, and that a queenless colony will gather little, if any, pollen. I do not find this to be the case in any event, and much less where the colony having no queen has plenty of brood to care for, as we have shown must be the case where dividing for increase.

If the part of the divided colony, which has no queen, is set on a new stand, then Mrs. Harrison's observations would be correct, regarding their quiet condition, after all of the old or field-bees had left this hive and returned to their old location; but if this moved-part had a queen, many of the bees would return to their old location, so that, in this case, the queenless part would show the most activity, for the part on the old stand will always show the most activity, whether having the old queen or not.

Where a colony has an old or failing queen, with very little brood in the hive, and much of that drone brood, then they will sometimes manifest the restlessness spoken of to some extent, should their queen be taken from them; but I claim that such a colony is not a suitable one to divide for increase.

Borodino, N. Y.

Some Apicultural Notes.

J. M. YOUNG.

During the bright weather of this month, the bees were out enjoying the warm sunshine.

Our experience in handling bees covers a period of nearly 20 years.

Our city, located on the Missouri River, has a population of nearly 9,000 inhabitants, and is the county-seat of Cass County, with good railroad facilities—the great B. & M. R. R., and the M. P. R. R., now under construction.

Bee-keepers throughout this vicinity prefer out-door wintering to any other method.

Experience teaches us that an apiary should be located on an eastern slope, with the hives fronting the east.

We prefer natural swarming to artificial, and always let the bees have their own way in this respect.

The 4¼ x 4¼ section suits us better than any other, from the fact that it holds just one pound.

Our comb-honey which was disposed of some time ago, sold readily at 17 cents per pound.

We sell most of our extracted-honey in quart fruit jars, and this is sold by going from house to house.

We live 30 miles south of Omaha, where there is always a good market for comb-honey, which is also very good for extracted-honey.

We always practice out-door wintering, from the fact that our bees have always been in chaff hives, made exactly to suit our ideas.

We always use a 2-story hive for extracting purposes, and never extract from anything but the upper story.

Our apiary is situated in the vicinity of large apple orchards, and near plenty of basswood timber and where plenty of white clover abounds. The bees stored last Spring large quantities of apple-bloom honey, so much so that the hives were chock full.

Plattsmouth, Nebr., Dec. 12, 1890.

A Convenient Carrier for Hives.

C. H. DIBBERN.

In August when the country was suffering under a severe drought, I feared that the white clover would be entirely burnt out, and that the honey prospects for the next year were not flattering. This, with the probability of having to feed a number of barrels of sugar to get the bees through the Winter, made the outlook for bee-keepers very gloomy. Some timely rains, however, revived the drooping vegetation, and gave the bees a fair supply and obviated feeding. In October we had copious rains and warm, growing weather, which brought the clover out again finely, so that the prospect for 1891 is very much improved.

CARRIER FOR HIVES.

I have now in use for the past 10 years, a very simple contrivance for carrying hives in and out of the cellar. It consists simply of two square hard-wood sticks, a little longer than the hives, with pieces of stout cloth tacked between the ends. All you have to do is to remove the caps of the hives and slip the stick below the cleats on the hive, and carry them by taking hold of the middle of the cloth pieces. This pinches the sticks together, thus getting a firm grip on the hive, making it well nigh impossible to slip, even when carried up steep stairs. A prominent bee-keeper was visiting me last Spring when we were taking the bees out, and said it was the best thing for carrying hives he had ever seen. It is my own invention and I have never seen anything like it described in the bee-papers. Of course it takes 2 to carry a hive.

WHAT TO DO WINTER EVENINGS.

Study up the bee business. Get some of the standard works on bees. Be sure and read one good book on queen rearing, and determine to do better bee-keeping in 1891 than you have ever done before. Few have bees so good that they cannot be greatly improved. It is a fact that if bees are left to themselves, they rapidly degenerate. It is only by persistently breeding from pure stock that we can make any headway, or even keep from going backwards. Most of us have plenty of empty hives and supplies, but very few of us have a surplus of bee knowledge. So let us read up and get ready for 1891.—*Western Plowman.*

Apiary, Management, and Honey Crop.

WM. STOLLEY.

I send you a picture of my apiary, as taken a few years ago. It is nearly a correct picture as it now stands.

The bee-shed proper is 8 feet wide, and the roof laps over about 2 feet. The posts, dividing the several apartments are only 6 feet apart, making the building 90 feet long.

For the Heddon hives I now have an extra vault, in which the hives occupied by bees remain permanently, Winter and Summer, and are packed with forest leaves in Winter.

I winter my bees in this shed, as you see them in the picture, only, that leaning boards, 24 inches wide by 6 feet long, are put up in front for protecting it against wind and snowdrifts.

All of my hives in the lower tier are double-walled, and besides lined between with heavy wallpaper.

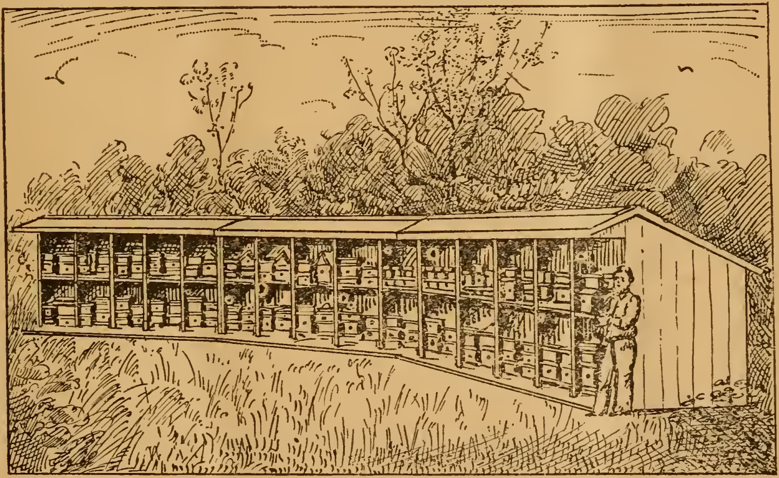
The upper tier of hives are single-walled and lighter, and are used for nuclei in the proper season, wherein I rear queens to supersede those which are too old, or not satisfactory otherwise.

Everything about the apiary is kept clean and nice, and all the hives are well painted with alternate white, blue, red, brown and yellow colors, and numbered.

Formerly I packed my bees in hay, but I have abandoned this, and the result is as satisfactory as though they had been packed. I never lost any in Winter in either way, so far.

I have but 26 colonies, all told; 5 of which I have in the new Heddon hives. The season of 1890 was not a good one. Excessive drought being the cause of the honey-crop failure.

I extracted 865 pounds of nice sweet and alfalfa clover honey, and took 84 one-pound sections from three of the Heddon hives.



Apiary of Wm. Stolley, Grand Island, Nebr.

My bees are in excellent condition for wintering, and each colony has 27 pounds of Winter stores on an average. I also have 300 pounds more in frames for Spring feeding. They were packed inside the hive on Oct. 10.

The Sugar Beet Factory, although very near my apiary, has so far not damaged my bees.

They have been flying but little, even on warm days, and for the last week it has been 65° Fahr. every day in the shade.

Therefore I hope that this new and very important enterprise of beet sugar manufacturing will not seriously interfere with the prosperity of my bees in the future.

Grand Island, Nebr., Nov. 24, 1890.

Foul Brood—Visit from the Inspector.

D. CHALMERS.

The most dreadful disease amongst bee-keepers is known as foul brood; and although not of modern origin, yet it has become so prevalent that there was at the last meeting of the legislature an act passed for its suppression and the Ontario Bee-Keepers' Association was authorized to appoint an inspector. At a directors' meeting in the Spring, Wm. McEvoy, of Woodburn, was appointed to the office for 1890, as he had had a good deal of experience with the malady.

He is paid by the Government, and any who desire his services, either for the inspection of his own or his neighbors' bees, must communicate with Mr. Allen Pringle, Selby, Ont., President of the Ontario Bee-Keepers' Association, under whose instructions the inspector acts.

Wednesday, Nov. 12, found him wending his way to my apiary; but as for the fact of who applied to the president to have him sent here, he and I are both ignorant. However, be it who it may, Mr. McEvoy and the writer had a good time, interchanging ideas—of which he is the possessor of many good ones—seemingly making no reserve, and readily admits when he is beaten. Of the hundreds of diseased colonies inspected this Summer, he has caused only 6 to be cremated.

When he visited me I told him that I would not allow any one to examine and inspect my whole apiary at this season of the year (as such would be to their injury), but would allow him to select and examine a few. He most readily admitted that I was right, but said also that orders are rushing in for him and the president sends him out, and what else could he do, but go? He only inspected one colony, in which I said dead brood had been found the last time they were examined, and in it he could find no trace of any disease. He and I pronounced the colony queenless on account of being somewhat weak; but the following day, being fine, found me giving them a close examination, and was astonished to find that the queen (which is one of this year) had commenced laying, the result, no doubt, of the previous day's excitement and had deposited eggs in fine regular order, in something like 8 square inches of worker comb, which would mean about 200 eggs; the chances are that the workers will eat those eggs, as it is not good for them to be breeding at this time of year. Mr. McEvoy promises another visit next May or June if re-appointed (which by the way, he has a right to be, to give his theory a chance), and will then give a close inspection.

Should this dread disease be found at that season of the year there is time during the Summer to treat and cure it, but if found now nothing can be done to cure it; hence the lack of wisdom of sending for the inspector on the verge of Winter.

Poole, Ont.

The Use of Essays at Conventions.

DR. C. C. MILLER.

In his essay at the Keokuk Convention, Rev. W. F. Clarke, says I accused him of being long-winded. The statement came in such an official and circumstantial way that I was left in too dazed a condition to offer any refutation, although I am utterly innocent of the charge. I wonder if I have not in some way been mixed up with the "big doctor" that was there.

The incident, however, has set me to thinking in such a way as to use that essay as a text. I raise the question, not whether it was too long-winded, but whether it should have had any place at all on the programme? I do not raise any question as to the interest of the subject, nor as to the masterly manner in which it was handled. I do not think that Brother Clarke will think of it as a personal matter, and if I hold erroneous views, no one more ably than he will set me right. Lest any one else should think anything personal is involved, I will include in the same category the essays of Mr. Newman and Prof. Cook.

As some of the friends know, I am something of a prohibitionist as to the matter of essays at conventions. It is so hard to have them always right, that on the whole I think it is better never to have any. I hardly know of a quicker way to kill the usefulness of a convention than to fill up all the time with essays.

It is urged that essays are useful as introducing discussion, and those who urge this (notably Prof. Cook with whom I am scarcely on speaking terms on this subject) say that they should be short, and right to the point. If all essays were of this kind I do not know that I could hold my ground.

But now take Prof. Cook's essay. He cannot write upon a subject without making it interesting. It is not in him. But what was there to discuss in his paper from which we could get any practical good? Was it not better fitted for the columns of one of our bee papers? And is not the same true of the other 2 essays?

I will tell you why I bring up this subject. In former years there was a feeling, that I think became pretty general, that essays at conventions had become decidedly objectionable, and they were largely abated.

It begins to look a little like a return to the former trouble, and I think it well to raise a protest. Indeed, there is some danger that the trouble may become greater than it ever was in the past. On the programme at Keokuk was a place for volunteer contributions, and I see the same is on the programme of the Michigan State Society. It did no harm at Keokuk, for only one paper came under that head, and that a thoroughly practical one with a purpose. But just see how it opens the flood-gates.

I ought to add that I do not hold the 3 friends mentioned as responsible. I suppose they merely did what they were asked to do. Some one may suggest that a little of the responsibility may have rested on my own shoulders. Well, I do not see that that makes the case any better.

THE NORTH AMERICAN.

Some pretty sharp criticism has been made as to the course of this Association, and a little of it may be deserved. I believe it will be a good thing to have all such things come out in open daylight. I am sure those who are in management—and I can speak quite freely, as I hold no office whatever—have no other desire than the greatest good to the greatest number. If in any respect there is need for improvement, I think that suggestions in that direction will not only be admitted, but welcomed in any of our papers.

There is room for strong hope that the North American, once incorporated, may become something stable and more useful than it has ever been. As to how it can do better work we have a subject well worthy of discussion.

Do not wait till the next meeting at Albany, but open the discussion now. Most of the things to be said about the North American Association and its conventions will apply to other associations and their conventions. These are becoming more common and more useful. The man who gives a single hint telling how an association can do more good or have better conventions is a public benefactor. Bring on your suggestions or your criticisms.

Marengo, Ills.

[Again, Dr. Miller is not with the majority. So far as our experience goes, there never was such a demand for essays at conventions as there is at the present time. We have been solicited for many that we could not supply.

Some years ago, we partially favored the Doctor's "hobby," just to see how it worked. The result of a trial was, in our opinion, unfavorable in some cases; in others it was the opposite. It all depends upon the President. If he is a sharp parliamentarian, and will look up the subjects to be discussed; if he will hold the speakers to the points under consideration; if he will continue the discussion only as long as it is kept up to the interesting point, and then change it to another subject, promptly—then essays are not a necessity.

On the other hand, if he is not an adept in the art of presiding over a meeting; if he does not possess a *good* list of subjects to be discussed; if he does not hold the speakers within proper bounds; if he cannot personally keep up the interest, and periodically enthuse the audience with his personal magnetism—then essays are a great convenience, to say the least.

While it is true that those essays which call out the best discussion are the most desirable, it is also true that essays like that of Prof. A. J. Cook, at Keokuk (to which reference is made), are exceedingly interesting, and quite appropriate. To us, the Professor's essay was one of the most interesting that was there produced.

There is another point that we wish to briefly notice. The secretaries of the different Associations have been writing to prominent persons soliciting these essays, and dictating in almost every instance, the subject to be treated upon. Now, either these secretaries must be induced to reform, or the writers must refuse the urgent solicitations.

One thing is certain, those who have acceded to these requests, and have devoted the time and energy to produce the essays, are entitled to *thanks* rather than even the slightest blame!

We are well aware that Dr. Miller did not intend to censure any one. He discussed the subject upon its merits; but still his condemnation is stamped upon the whole business.—Ed.]

Can a Woman Keep Bees and Poultry?

MRS. WOODWORTH.

I see no reason why she cannot. I, for one, would like to know who raises the chickens that supply Rockford?

I am sure that the greater part is raised by the women and children on the farms; for farmers, as a rule, have no time to fuss with such small things. He would think he could plow an acre of corn, while wasting his time fussing with an old hen.

So, who is it Rockford gets her supply of eggs and chickens from, if not from the wives and daughters of the farmers?

I must say the little girl is far more regular and methodic in gathering or hunting the eggs and feeding the chickens than the little boy is. But I suppose it is natural. The boy always wants to do as papa does.

They never think of chickens nor eggs until they see them on the table in a luscious form of some kind—chicken pie, or baked chicken with gravy, or fried eggs with ham for breakfast. Is not that, gentlemen, the most satisfactory part in connection with chickens and eggs.

I can eat them, but they are too trifling for me to spend my time with. I could raise a horse with less trouble.

Now, about a man making a business of poultry raising. Why! he has capital, so has good houses and coops, and strength to keep them clean. He puts in all his time. He does not stop to wash the dishes, or make the bread. His produce he ships to the large cities. Rockford does not get much of it.

But by way of divergence, let me add, Rockford will soon be a large city. She is something like a motherly old hen herself, trying to spread out and brood all the ends and additions, until our very farms are being lost in the city. It will take a great many poultry-raisers to supply the market, if she keeps on booming.

This raising poultry as a side issue on a farm is quite different from making a general business of it, and having everything handy and convenient. Give a woman the same advantage, and her strength being equal, I think she would be fully as successful at the business as a man.

But allow me to remark, the work of raising poultry and eggs, as usually done by women on a farm, would be much pleasanter, and I think just as profitable, if men would furnish houses and coops, and keep them clean, for most women have too many household cares to attend to everything properly, and a little assistance with the rough work would help them out amazingly.

Supposing you try it gentlemen. It will not take much time, "and there is no great loss without some small gain." It may not be in a pecuniary sense, but your wife will be better natured, and that is something.

As for keeping bees, I think a woman can do that just as well as a man, providing she has the inclination and a sufficient number of colonies to begin with.

She can purchase material for her hives ready prepared. She can nail them together herself, or she can hire a man to help her a day or two; it matters not how, only that she gets them made, then she can do the rest herself. It surely is not so hard as putting down a carpet, or churning.

As for painting, where is the woman that cannot paint a bee-hive, and decorate it, too, for that matter. As for the small fixtures, it is easy, light work; she can get every piece ready in the Winter and Spring, just as well as a man. She can have them placed into the cellar in the Fall, and carried out in the Spring. She can smoke them, and examine them. She can tell if they are queenless, and also knows if they are weak or strong.

She can divide the comb; she can feed them. She can tell a drone from a working-bee, or a queen-cell from other cells. She has all the supers ready, and can put them on at the right time. When they are about to swarm, she is on the watch. She has her hives all in readiness. She has her queen-cage ready, or divides the comb and cuts out the queen-cells, just as she feels about increasing or merely keeping her number good.

I enjoyed raising poultry, but bees are my favorites, and if I could give them my undivided attention, I think I could manage them as well as the average man. Of course they have a business end that we should be cautious of, but a woman need have no more fear of getting stung than a man. They are sharp, but not sharpers, and I fail to see why a woman with ordinary tact and skill, cannot make a success of bee-keeping as well as a man.—*Read at the Northern Illinois Convention.*

The Honey Bee—A Prize Essay.

MISS KATE RICHMOND.

In point of antiquity at least the bee is deserving of honor, since it in all probability, was a native of the garden of Eden. I wonder, in those halcyon days of the early purity and innocence of man, when the long and beautiful days must have seemed to the 2 human inhabitants an endless paradise of glorious Summer, if the beautiful silence was ever displaced, or perhaps, made more restful, by the "humming" of the bee, as it winged its drowsy flight from blossom to blossom gathering the honey that must have been spread with such a lavish hand in that queen of gardens. * *

Amongst the ancient Egyptians, the bee was the hieroglyphical emblem of royalty. I do not know whether it became the emblem of royalty, to them, from the fact that something analogous to a monarchy, has frequently been erroneously supposed to exist in a beehive. True, there is one of the members of the hive known as the queen, who, at certain seasons, is the object of particular regard on the part of all the other members of the hive, but only because the instincts of all its members, are variously directed towards her, at that time, as one indispensable to the objects for which the bee community exists; but beyond the fact of having this attendance upon her, those, who make a study of the subject, tell us that there is no evidence whatever, of anything like authority exercised by the queen.

To modern nations the bee furnishes an example of all that is inspiriting and patriotic. The patriotism is there at any rate. You do not find the members of a bee community taking exception to the way in which the affairs are managed. There is no clamoring for promotion, but each insect fills the place for which it was intended, without questioning. They all co-operate towards the common benefit of the community, and agree that "Union is strength," since in repelling invasion, or avenging aggression, the whole community become as one, inasmuch as their several energies are directed to the one object of the preservation of their hive. And as to the inspiration, no one can deny that an interview with a bee that means business, is decidedly and intensely inspiriting. The interviewer is inspired with feelings of———well, they need not be recounted here, as every one who has had the pleasure (?) of an interview with the bee, can supply the ellipsis to suit himself.

As a mathematician, the bee can prove Euclid mistaken, when he said "There is no royal road to learning" since it is a geometrician par excellence, and reached that state, too, without any of those weary interviews in which the human student questions the advisability and accuracy of the great mathematician's geometrical plans, but, in which the student invariably comes out second best.

Look, for example, at the mathematical ingenuity exhibited by the bee in the formation of the cells in the comb of the hive. They are hexagonal in form, the shape which, as every mathematician knows, will combine the greatest economy of space and material, since the hexagon being perfectly regular, there can, therefore, be no interstices between, and consequently every atom of space is economized.

Besides the hexagon, the bee constructs other mathematical figures of various forms that are necessary to the strength and continuance of the hive. And then in respect of the construction of these mathematical figures, the bee is always ahead of the human student again, for it never makes mistakes. All its proceedings are founded on sure and infallible principles, and you never find a bee unwise enough to question those principles. The bee furnishes a lively testimony to the proverb "Familiarity breeds contempt." With what supreme and wholesome contempt for the insect are you permeated after an interview, in which the bee, to say the least of it, has been decidedly familiar; and how feelingly you remark to yourself that you will keep it at a distance evermore.

What a lesson is furnished to us, too, in the provident industry of the bee. Observe, will you, how instinct, which is merely a blind impulse as far as the bee is concerned, leads it to provide for a possible future, to care for its young, to provide, in fact, in every way for the healthful continuance of the community; while man, whose superiority over the insect is asserted in the fact that he is provided by the Creator with reason, the noblest of all God's good gifts to man, will look upon to-day only as the day before to-morrow, and defer being prudent to old age, looking forward to a promise of wisdom as a patron of his latter years, and who, when he arrives at old age, finds that his years have far outstripped his wisdom, and that he has now neither the opportunity nor the capability for the wisdom that might have been his portion had proper prudence been exercised in his earlier years.

In studying the habits and work of the bee, we cannot help referring the instinct shown in their work to a higher power, which makes the instinct subserve the highest ends for which it was created, and we must conclude also, that the Creator, in showing his perfect work in the bee, has also shown his perfect love to man. May we have in a measure the true philosophy displayed by that wise insect.

> "Wiser far than human seer,
> Yellow breeched philosopher:
> Seeing only what is fair,
> Sipping only what is sweet,
> Thou dost mock at fate and care,
> Leave the chaff and take the wheat.
> When the fierce north western blast
> Cools sea and land so far and fast,
> Thou already slumberest deep:
> Woe and want thou cans't outsleep:
> Want and woe which tortures us,
> Thy sleep makes ridiculous."

—*Attwood Bee.*

Hives and Other Fixtures.

C. A. BUNCH.

I am decidedly in favor of loose bottom-boards for hives, or, in other words, those not nailed to the brood-chamber. My reason for such, is that the brood-chamber is drier, for the moisture has a better chance to escape.

To make a hive-stand that has no superior for out-door wintering, I think the following a very good way: Make a box, the end pieces of 2x4, and the side pieces of 1x4 inch boards; the outside dimensions of this stand must be the same as the outside of the bottom-board, which is to be nailed on the underside of the bottom-board, and must be from 4 to 6 inches longer than the hive, for the bees to alight on, and one inch wider than the inside of the hive.

The lower inside and back end of the brood-chamber is rabbeted together, so that the sides and back end will project over the bottom-board, which is a great benefit to the lower edge of the brood-chamber, also the bottom-board.

Now, what I like about this hive-stand is that it leaves no place for toads to get under, neither can cold winds nor frosts penetrate it; and as the stand and bottom-board are the first of a hive, to give away, we can get a new one occasionally, if needed.

Good substantial hives, or cheap ones, made of ⅞-inch lumber, are in great demand, particularly now that honey is so very cheap.

But, as for myself, I do not want any more of them. Why? Because they do not protect the bees from the hot sun as they should in Summer, nor are they what they should be for out-door wintering, unless you use an outside wintering case; and I, for one, have no use for such traps, although as far as my experience goes in wintering bees, I would say they are good for that purpose, but the outside cases are sure to cost considerable. I think there is as much prospect of their coming into general use as some of the swarm-hivers, and other bee-fixtures.

A hive that gives the best of satisfaction to me, for a Summer and Winter hive, is made as follows: Make the brood-chamber, sides and ends, of 1⅝-inch pine plank, and the supers of ⅞-inch lumber. I use chaff packing above for wintering.

These hives are intended for wintering bees at the North while still on the Summer stands. I have never wintered bees in the cellar.

Do bees get drunk? Last Summer, when mowing weeds, I struck a stalk of globe thistles, or Chapman honey-plant, as it is called, whose flowers were covered with bees. These fell upon the ground, and sat or laid as if they were intoxicated. I have heard of similar cases before. Is this plant good for honey?

Nye, Ind.

Brant Bee-Keepers' Convention.

D. ANGUISH, SEC.

The fifth annual meeting of the Brant Bee-Keepers' Association was held at Brantford, on Saturday, Nov. 22, 1890. Present—D. Anguish, J. R. Howell and wife, Thomas Burket and wife, Cyrus Kitchen and wife, Miss Bowers, Miss Ash, George Barber, C. Edmonson, G. Springsted, C. Flanders, A. McMeans, A. Malcolm, C. Ramey, S. Dickey, F. Pipe, C. Johnson, R. Tailor, T. Ivoy, Miss E. Ramey, Miss Harley, W. Phillips, L. Petery, Mr. Steadman, R. Shellington, and Mr. Horseman.

The report of the Secretary was read and adopted, and the following officers were elected for the coming year: President, G. Barber; Vice-President, Miss Ash; Secretary-Treasurer, D. Anguish.

The essays read were, "Apiarian Exhibits," by G. Barber. "The Best Method of Wintering Bees," by D. Anguish. Mr. C. Edmonson was to have read an essay on "Which was the most Profitable, Comb or Extracted Honey?" but not having prepared it, he addressed the meeting, and told them what his experience had been.

It was brought out in the discussion, that the public looked upon and believed that honey, when candied, is adulterated with sugar; but that was a mistake, the majority of the members preferred it to become candied.

The meeting was a profitable one to those who were present. The attendance was greater than ever before, and many enrolled themselves as members.

The retiring President, Mr. J. R. Howell, was appointed a delegate to the Ontario Association. He thanked the members for the honor conferred upon him, and gave them some good, sound, practical advice, in regard to their Association.—*Canadian Bee Journal.*

Review of German Bee Periodicals.

J. DENNLER.

Die Bienenpflege (Wurtemberg). No. 10 contains a report of M. Baelz to the Strasburg Congress on "Our Work and our Duty." The learned writer first refers to the different apicultural works, the difficulties encountered by the bee-keeper, not only from neighbors, but also from the local authorities and others, the competition which various substances having the designation of honey make with our flower honey, &c., and lastly, he proposes to submit to the government an Act which would have the effect of protecting apiculture, and more especially the product of the bees.

In the same number is published a concise report of the congress of German and Austrian bee-keepers at Gratz, in Austria, which states that the exhibition was a poor one, and that lectures were given by MM. Vogel, Ambrozie, Bendu, Spiess, Kultenegger, Glock, and Mayer. Dr. Von Beck, of Vienna, was elected Vice-President. The next congress, in 1891, will take place in Lubeck, and in 1892 at Budapest. The bee-season has been a very poor one in Wurtemburg. It may be summed up in these words: Many swarms, and little, or hardly any, honey.

Die Bien und ihre Jucht (Grand Duchy of Baden). The annual general meeting of the Society was held this year at Huslach, in the beautiful valley of the Kinzig, and was a complete success. Amongst the subjects discussed should be mentioned that referring to heating hives in Winter and Spring, a system originated, and so warmly advocated, by Pastor Weygandt, of Hess. To pay proper attention to the bees, and to guard against losses, was the opinion of all the speakers.

The President, who had tried the heating system last Winter, said that brood-rearing is commenced too soon, and young bees, not able to get out, die. The stove "Carbon-Natron-Ofen" does not answer the purpose properly, and the American slow-combustion stoves give off too much heat.

Husser, who had also tried this system, says the queens become exhausted too soon, and that the consumption of food is no less than without the heating. In adopting the heating system, the bee-keeper becomes the slave of his bees.

MM. Weiss and Schoflin-Lauger also spoke against heating.

M. Weiss, of Karlsruhe, said that the essential requisites for good wintering were a numerous population, a young queen, wholesome food, and a good hive.

Nordlinger Bienenzeitung. Editor, Vogel, in a lengthy report recommends willows as bee-plants, which supply a good deal of honey and pollen in the Spring. The writer gives a list of 35 different species of willows.

Schlesische Bienenzeitung (Prussia). Theise recommends *Trifolium incarnatum* as an excellent bee-plant. This clover attains to 3 feet in height, or even more, and yields a good nutritious and abundant forage for cattle. It is sown in April, and it is harvested in July and August. Is may also be sown in Summer and cut in the Autumn, or sown in Autumn and cut in Spring.

Der Schlissche Truker (Austria). The editor recommends a swarm-catcher, which has been improved by Junginger. An extract from the weekly medical journal of Prague recommends stings of bees as an excellent remedy for rheumatism. An Austrian bee-keeper has just invented a brood comb made of tin, having cells the natural size.

Munchener Bienenzeitung. The Munich Exposition, called "Octoberfest-Anstellung," which takes place every year in the month of October, was this year very fine. Bee-keeping was also well represented.—*British Bee Journal.*

CONVENTION DIRECTORY.

Time and place of meeting.

1891.
Jan. 7, 8.—Ontario, at St. Catharines, Ont.
W. Couse, Sec., Streetsville, Ont.

Jan. 16, 17.—Indiana State, at Indianapolis, Ind.
Geo. C. Thompson, Sec., Southport, Ind.

Jan. 19, 20.—Colorado State, at Denver, Colo.
E. Milleson, Pres., Box 2522, Denver, Colo.

Jan. 22-24.—New York State, at Albany, N. Y.
Geo. H. Knickerbocker, Sec., Pine Plains, N. Y.

Feb. 10, 11.—Ohio State, at Toledo, O.
Miss Dema Bennett, Sec., Bedford, O.

Feb. 11, 12.—Eastern Iowa, at Maquoketa, Iowa.
Frank Coverdale, Sec., Welton, Iowa.

May 7.—Susquehanna County, at Montrose, Pa.
H. M. Seeley, Sec., Harford, Pa.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—The Editor.

North American Bee-Keepers' Association

President—P. H. Elwood. . .Starkville, N. Y.
Secretary—C. P. Dadant . . . . . .Hamilton, Ills.

National Bee-Keepers' Union.

President—James Heddon . .Dowagiac, Mich.
Sec'y and Manager—T. G. Newman, Chicago.

Bee and Honey Gossip.

More than Pleased.

I am more than pleased to learn that the New Year will see the American Bee Journal enlarged. Although chock full of good and interesting things heretofore, I am fully convinced that the bee-keeping public, especially beginners, will be more than benefited by the additional hints and helps which is to be part of each number. J. H. Blanken.

Jersey City, N. J., Dec. 14, 1890.

Living in Hopes.

I had 17 colonies last Spring, and buying one more, I had 18 to place on the stands, and as they all seemed to be in good working condition, I was expecting a good honey-flow, but just as the bees were about ready to swarm, in apple bloom, a cold, wet spell set in, and some of them commenced to starve. I had to feed 2 colonies. There was an abundance of flowers, but there seemed to be no nectar of any account. I was thinking, when buckwheat came in bloom, there would still be a good honey-flow, but it was just the same, I did not get but about 50 pounds of honey in one-pound sections, which sold for 25 cents per pound. Most of my colonies appear to have enough honey for Winter. My bees did not swarm, but killed off the drones. As soon as that cold spell came my Italians gathered the most honey. I hope next Summer we will have a better honey-flow. I always live in hopes, and a word for the American Bee Journal, I would not be without it, as it is the most interesting paper I ever read on bee-culture. H. H. Arnold.

Maze, Pa., Dec. 22, 1890.

Always Wintered Well.

I have 5 colonies of bees, which gave 7 swarms last spring. Eleven of these I packed with chaff 3½ inches, also packing it 5 or 6 inches over the top. I put a piece of burlap over the brood-frame to keep the dirt out, and my bees always winter well. Last Winter one of my colonies died, and on examination found the hive full of bees and honey, and this Winter I have one very nearly in the same condition. This I have left on the Summer stand without any covering. The honey crop has been a very poor one here this season.

Telah C. Whiting.

Athens, N. Y., Dec. 19, 1890.

Future Prospects.

Being obliged to be away from home much of the time, my bees, not receiving the care they ought to have had, have taken "French leave" during swarming, so that last year out of 13 colonies I had but 4 new swarms, making 17 colonies in all, which I hope will be increased in the future. I obtained about 150 pounds of honey this year. I am somewhat advanced in years, 72 years old, yet not too old to plan for the future. Dr. P. W. Schmidt.

Ottawa Station, Mich., Dec. 20, 1890.

Report of the Season.

Last Spring I began with 100 colonies of Italian bees, which have increased to 135 by natural swarming. They commenced work as if they intended to do great things in the way of gathering nectar and pollen. But, alas! a cold wave struck this part of Indiana, and blasted all our hopes of getting any honey from fruit bloom. The colonies nearly ceased brood rearing, so that by the time white clover made its appearance, though very plentiful, they were not strong enough to utilize it to any advantage in gathering for a surplus crop, as there seemed to be but little honey in the bloom, while the linden gave but a small supply. Swarming was very light. The Fall crop would have been good, but for the cold weather which caused the bees to remain in their hives a greater part of the time. Yet, notwithstanding this, they seem to be in a very good condition for Winter. My crop for 1890 is 800 pounds. I placed 124 colonies in the cellar, and hope to have a good season next year.

DANIEL WHITMER.

South Bend, Ind., Dec. 17, 1890.

Large Increase.

Last Spring I had 30 colonies of bees, most of them very light, which I fed. These increased to 80. From them I obtained but 200 pounds of honey. Was it because they swarmed so much? I am at a loss to know how to obtain comb-honey from the old colonies. I put on sections at different times during the Summer, and obtained only 20 filled sections.

E. COOK.

Cataraqui, Ont., Dec. 15, 1890.

[The large increase was at the expense of the honey. You must not expect both honey and increase at the same time in profusion. The increase was not necessarily the result of the feeding. The undesired swarms should have been returned to the parent colonies—so that they might have been well supplied with bees to gather the honey when the harvest came. The colonies were probably too weak in numbers to gather the honey—having spent their energies in swarming.—ED.]

Bee-Cellar for Winter.

For several years I practiced in-door wintering in a cellar under a dwelling house. The hives were usually placed in there about the last of December. It is a great mistake to place them in the cellar too early in the season, as there is no brood in the hives to become chilled, and the bees are abundantly able to take care of themselves. Also, they may possibly get several flights during the month. After they are placed in the cellar, keep the entrances open full width, and the temperature between 38° and 44°. Too warm a temperature will cause uneasiness, and too much cold, action and roaring. Dampness is less to be feared than cold. My best success in wintering was in a cellar that contained water all Winter. Pleasant odors of fruit kept in the same cellar with the bees, are liable to cause early brood-rearing.

Lockwood, N. Y. J. H. ANDRE.

Bay State Hive.

The hive I use is very much like the Bay State hive, and I think it is the best and cheapest in existence for wintering on the Summer stands. I have also used "the twin hive," that is, I put a division-board in the middle, and have a colony on each side of it. One entrance faces the east, and the other the west. This is very good for Winter, but is rather cumbrous when I want to move it. Closed-end frames are much used in New York State.

J. H. BLANKEN.

Jersey City, N. J., Dec. 20, 1890.

Looking Forward for a Better Crop.

During the Summer we were obliged to feed our bees, and owing to the poor honey season will have to feed them to keep them through the Winter; yet notwithstanding this, we are not discouraged, but look forward to a more prolific crop next season.

C. EGGLER.

Sigel, Wis., Dec. 20, 1870.

Small Increase and Honey-Crop.

Last Spring I owned 48 colonies of bees, and after swarming I found that they had increased to but 52, and although I obtained but 250 pounds of honey, I find that we will have plenty for our own use.

GEORGE A. KERR.

Lowell, Mich., Dec. 19, 1890.

Good Report.

Bees in this locality are reported as doing well. My 20 colonies, which I started with last Spring, have increased to 38. From them I obtained 1,180 pounds of comb-honey, which brought 12½ cents per pound in the home market.

JAMES W. ADAMS.

Athens, Ky., Dec. 19, 1890.

Old, but Young.

The past season was a very poor one for honey in this section of country, the bees gathering but very little. My 77 colonies, spring count, have increased to 96, and when put into the cellar, 86 were in good condition. I obtained but 1,750 pounds of comb-honey, and 1,500 of extracted-honey. Although in my 81st year, I am still young enough to enjoy reading the BEE JOURNAL.

Eldorado, Wis. W. C. WOLCOTT.

Looking Backward through the year,
Along the way my feet have pressed,
I see sweet places everywhere—
Sweet places where my soul had rest.

My sorrows have not been so light
The chastening hand I could not trace;
Nor have my blessings been so great
That they have hid my Father's face.
—PHŒBE CARY.

Chaff Hives for Winter.

I winter my bees in chaff hives on the Summer stands, using the nonpareil chaff hive containing 8 frames, and 7 by 17 inches, outside measure. I have 80 colonies and prefer the Italians. Very little honey was secured from Fall flowers. I produce both comb and extracted honey, and sell it all in the home market. The past season was a poor one. The surplus was taken between June 8 and July 20. I had 75 colonies in the Spring and obtained 2,000 pounds in the comb and 1,200 pounds of extracted honey. It was gathered from locust, clover and raspberry blossoms. Basswood was a failure. I have had to feed for Winter stores to all but 8 colonies. A. G. BAYARD.

Cheshire, N. Y.

Breeding too Early.

I have 48 colonies of bees in my cellar, and the larger portion of them are beginning to rear brood. Now is it right for these colonies to commence this early in the season, and will it hurt the wintering of them? Some of these are hybrids and some Italians, and I find that the former are worse than the latter in this respect. A. E. BRADFORD.

Hammond, Wis., Dec. 20, 1890.

[It is too soon to breed, and the bees will probably dispose of the brood by eating it, or otherwise. No damage to the colonies will result.—ED.]

Insuring Bees.

To E. L. Plumb, who asks on page 811 concerning the insuring of bees, I will say that I have my bees insured in the Fire Association of Philadelphia for $400, the rate being 60 cents per $100, or the whole policy being $3,200 for three years, including houses, barn, bee-supplies, household goods, etc. I have 113 colonies, and these are insured in the cellar and on the premises.
GEO. H. ASHBY.

Albion, N. Y., Dec. 22, 1890.

Moving Bees—No Losses.

On April 1, I came to this place from Pennsylvania, bringing with me 65 colonies of bees, which stood the journey well. On the 3d of April I placed them, all in fine condition, on their future stands and liberated them. They were out in short order enjoying the warm sunshine. From that time to the white clover bloom, the weather was so unpleasant, that the bees did very little else than fight, dwindle and die, until there were not enough in some of the colonies for a respectable nucleus; so by the time they began to work on white clover, I had but 46 colonies left. By doubling up these I reduced them to 23, and after swarming found I had 15 new colonies. I obtained 600 pounds of white clover and basswood honey in comb, and 100 pounds of extracted honey. I did not get any surplus buckwheat honey, although there was an abundance of it; but take it all in all, my bees were in a very good condition for wintering as far as young bees are concerned.
A. R. TUBBS.

Portville, N. Y., Dec. 20, 1890.

Foul-Brood Treatment.

MR. EDITOR:—In referring to your publication of the essential portions of our *Foul-Brood Bulletin*, on page 819, you say you trust I am now satisfied that you are willing to do your part in disseminating the much-needed information, in reference to the cause and cure of Foul-Brood. Yes, I am now satisfied. You have done the proper thing so far, and no doubt you may be called upon, in the future, to give space to the further discussion of the question, for most people need "line upon line and precept upon precept" in order to get them to do, and to do right. Your correspondent, of a week or two ago, who criticises our plan of treatment and says he failed to cure by it, evidently fails to comprehend some of the essential points in the treatment. I leave the Inspector, Mr. McEvoy, to attend to him and set him right.

Wishing yourself and readers all the compliments, and enjoyment of this season of the year. ALLEN PRINGLE.

Selby, Ont., Dec. 18, 1890.

[We are always happy in trying to do good, or spread the light. The article by the Inspector appeared last week.—ED.]

Supply Dealers should write to us for wholesale terms and cut for Hasting's Perfection Feeders.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

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ALFRED H. NEWMAN,
BUSINESS MANAGER.

Business Notices.

☞ Subscribers who do not receive their papers promptly, should notify us at once.

☞ Send us *one new* subscription, with $1.00, and we will present you with a nice Pocket Dictionary.

☞ The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to pay for another year.

☞ Systematic work in the Apiary will pay. Use the Apiary Register. Its cost is trifling. Prices:

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 25
" 200 colonies (420 pages)	1 50

☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

CLUBBING LIST.

We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

	Price of both.	*Club.*
The American Bee Journal	$1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Guide	1 50	1 40
Bee-Keepers' Review	2 00	1 75
The Apiculturist	1 75	1 65
Bee-Keepers' Advance	1 50	1 40
Canadian Bee Journal	2 00	1 80
American Bee-Keeper	1 50	1 40
The 8 above-named papers	5 75	5 00
and Langstroth Revised (Dadant)	3 00	2 75
Cook's Manual (1887 edition)	2 25	2 00
Quinby's New Bee-Keeping	2 50	2 25
Doolittle on Queen-Rearing	2 00	1 75
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 60	1 50
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	2 20
Western World Guide	1 50	1 30
Heddon's book, "Success,"	1 50	1 40
A Year Among the Bees	1 50	1 35
Convention Hand-Book	1 50	1 30
Weekly Inter-Ocean	2 00	1 75
Toronto Globe (weekly)	2 00	1 70
History of National Society	1 50	1 25
American Poultry Journal	2 25	1 50
The Lever (Temperance)	2 00	1 75
Orange Judd Farmer	2 00	1 65
Farm, Field and Stockman	2 00	1 65
Prairie Farmer	2 00	1 65
Illustrated Home Journal	1 50	1 35

Do not send to us for sample copies of any other papers. Send for such to the publishers of the papers you want.

We send both the Home Journal and Bee Journal for 1891, for $1.35.

Catarrh, Catarrhal Deafness, Hay-Fever—A new home treatment whereby the worst cases of these hitherto incurable diseases are permanently cured by a few simple applications made once in two weeks by the patient at home. A circular describing the new treatment is sent to any applicant free on receipt of stamp to pay postage by A. H. Dixon & Son, sole proprietors, 345 West King Street, Toronto, Canada. 49A 12Mtf

Binders made especially for the BEE JOURNAL for 1891 are now ready for delivery, at 50 cents each, including postage. Be sure to use a Binder to keep your numbers of 1890 for reference. Binders for 1890 only cost 60 cents, and it will pay you to use them, if you do not get the volumes otherwise bound.

HONEY AND BEESWAX MARKET.

DETROIT, Dec. 25.—Comb Honey is selling at 15@17c. White Clover quite scarce. Extracted, 7@9c. Beeswax, 26@27c.
M. H. HUNT, Bell Branch, Mich.

NEW YORK, Dec. 24.—Market is very quiet, especially on comb honey. We quote: Fancy white 1-lbs., 15@16c; 2-lbs., 13@14c; off-grades, 1-lbs., 13@14c; 2-lbs., 12c; buckwheat, 1-lbs., 11@12c; 2-lbs., 10c. Extracted, basswood and white clover, 8½@9c; buckwheat, 6½@7c; California, 6¾@7¼c; Southern, 65@70c per gallon. Beeswax, 25@27c.
HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

KANSAS CITY, Dec. 26.—Honey is very slow sale, both comb and extracted. We quote white 1-lb. comb, 16@18c; dark, 12@13c; white, 2-lb., 14@15c; dark, 11@12c; extracted, 6@7c. Beeswax, 25c.
CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CINCINNATI, Dec. 27.—Demand is fair for extracted honey at 6@8 cents. There is a good demand for choice comb honey at 18@20 cents. in the jobbing way. Arrivals are fair of all kinds but Southern extracted, which is scarce.

Beeswax is in good demand at 24@26c., for good to choice yellow. C. F. MUTH & SON,
Corner Freeman & Central Aves.

CHICAGO, Dec. 12.—New honey arriving very slowly, demand active, and all receipts are taken promptly. We quote: White clover 1-lbs., 16@18c.; 2-lbs., 14@15c.; dark 1-lbs., 11@12c; 2-lbs., 9@10c. Extracted meets with quick sale, values ranging from 6½@7½ cts., depending upon quality and style of package. Beeswax, 28@30c.
S. T. FISH & CO., 189 S. Water St.

BOSTON, Dec. 26.—We quote fancy white 1-pound combs, 19@20c; fair to good, 18@19c. No 2-lb. combs in the market. Extracted, 8@9c. No beeswax on hand.
BLAKE & RIPLEY, 57 Chatham Street.

KANSAS CITY, Dec. 18.—Fancy white 1-lb. comb, 18c; fair to good, 17c; dark 1-lb., 14@15c; 2-lb. white comb, 15@16c; 2-lb. dark, 13@14c; extracted, white, 7c; dark, 5@6c.
HAMBLIN & BEARSS, 514 Walnut St.

ALBANY, N.Y., Dec. 27, 1890.—The honey market is quiet, but stock is light and prices well sustained. We are selling white at 16@20c; mixed, 14@15c; buckwheat, 12@14c. Extracted, white, 9@10c; amber, 7@7½c; dark, 6@6½c. Beeswax, 27@30c.
H. R. WRIGHT, 326-328 Broadway.

CHICAGO, Dec. 26.—There is not the volume of trade usual at this season, yet prices are without material change since last quotations. Best lots of white honey in 1-pound sections, brings 17@18c; brown and dark, slow, at uncertain prices. Extracted, 7@8c per pound. Our stock is light, as to quantity, but is kept well up to demand by daily receipts. Beeswax, 27@28c.
R. A. BURNETT, 161 S. Water St.

DENVER, COLO., Dec. 26.—First grade 1-lb. sections, 16@18c. Supply exceeds the demand at present. Beeswax, 25@28c.
J. M. CLARK COM. CO., 1517 Blake St.

A Nice Pocket Dictionary will be given as a premium for only **one new** subscriber to this JOURNAL, with $1.00. It is a splendid little Dictionary—just right for the pocket. Price, **25 cents.**

Our Sewing Machine.—One who has purchased a Sewing Machine of us, as advertised on page 734, volunteers this statement:

> I am well pleased with the Sewing Machine you sent me; any persons wanting a good Sewing Machine, one that is equal to the high-priced machines which are sold by agents, can do no better than to send for your $15.00 Machine. They will be agreeably surprised when they see it. Mine is really better than I expected.
> W. J. PATTERSON.
> Sullivan, Ills., Dec. 5, 1890.

Bee-Conventions will be held during the next few months in many localities. The most convenient thing at such gatherings is the Convention Hand-Book. It contains a simple Manual of Parliamentary Law and Rules of Order for Local Bee-Conventions; Constitution and By-Laws for a Local Society; Programme for a Convention, with Subjects for Discussion. In addition to this, there are about 50 blank pages, to make notes upon, or to write out questions, as they may come to mind. They are nicely bound in cloth, and are of the right size for the pocket. We will present a copy for one new subscription to the BEE JOURNAL, besides your own renewal (with $2 to pay for the same), or 2 subscribers to this HOME JOURNAL may be sent instead of one for the BEE JOURNAL.

Subscribers whose time does not expire for some months can safely renew at any time, without fear of loss, because we always extend the time from the date of expiration on our books. If you want any other magazine or newspaper, we can furnish it, and save you money by clubbing it with the BEE JOURNAL. See our list of a few of them on page 27.

The Investment of a dollar in the BEE JOURNAL, gives you 52 dividends in a year. Can any one desire a better investment? or will they ask for richer returns?

Only a Few complete volumes for 1890 are on hand. If any one desires to have a full set of numbers for binding, they should be sent for soon.

THE AMERICAN BEE JOURNAL
CIRCULATES
ALL OVER THE WORLD
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVII. Jan. 8, 1891. No. 2.

Editorial Buzzings.

Golden Rod.

Graceful tossing plume of glowing gold.
Waving lonely on the rocky ledge,
Leaning seaward, lovely to behold,
Clinging to the high cliff's ragged edge.
—CELIA THAXTER.

Golden Rod last year was credited by many apiarists in different States, with having yielded considerable honey.

Flowers were blooming out-of-doors on Christmas day in Vashon, King county, Washington. So writes our friend, John Boerstler. The mean temperature for November was 46¼°; and December was very much like it.

The Rev. Emerson T. Abbott has gone to Texas, for a change of air, as his health is not very good. He will remain for a few weeks, and then return again to St. Joseph, Mo. He has our best wishes for renewed energies.

What next, asks the Michigan Farmer, and then adds:

> What won't a beeman patent next! Merriman, of Massachusetts, has patented a "bridge" to enable bees to pass through the chaff or packing of a double-storied hive—two strips nailed to cleats allowing space for a bee to pass constitutes this "bridge," which, like many another device, has been used by apiarists, in some form, for years.

We give it up! Next time, ask us something easier!

Correspondence on bee-matters is solicited. If you have anything worth writing about, send it along.

To Show Appreciation for the good work we have done in the past, please to call the attention of your friends to our JOURNAL, and ask them to partake of the feast with you for 1891.

The greatest glory is not in never falling, but in rising every time we fall.

Now is the time to join the National Bee-Keepers' Union. Send to this office for the necessary Blanks, if your name is not found on page 60 of this JOURNAL. New members for 1891 are not included in that list.

To select well among old things is almost equal to inventing new ones.

The Doll Show was a great success. There were 3,000 dolls exhibited. It is celebrated by the publication of a "Doll Supplement" this week by Frank Leslie's Illustrated Newspaper. The treatment of the special patient sent to Berlin, is illustrated, and the condition of the patient described.

Why Complain because others do not agree with us? a little reflection would show us that each one's conception and understanding, must be according to their culture and experience.—*Exchange.*

Moving Bees Several Miles.—Frank S. Abbott, of Cattaragus County, N. Y., writes:

Please give details, in the Bee Journal, how and when to move bees. I have 20 colonies, and I want to move them about 15 miles. F. S. Abbott.

They can be moved any time, but, on a sled when the ground is covered with snow, would be preferable. Mr. Erkel has had considerable experience in moving bees on wagons, over rough roads, etc., and he gives his experience and advice thus:

To successfully move bees, the bottom as well as the top of the frames should be securely fastened, so they will not slide together and kill the bees. To fasten the bottom of the frames, cut ten notches in a stick one inch wide, or just wide enough to correspond to the ten frames; or you might drive small nails through a thin strip in such a way that a nail will come between every two frames.

Now, with a smoker in hand, pry up the hive from the bottom-board, and give them a puff or two of smoke to drive them out of the way; then, before they get time to come down, slip the projection on the notched stick, or the nails between the frames, using one, or better, two of these sticks; let down the hive, and the frames cannot get out of place.

I generally fasten the top of the frames by placing a thin strip of enamel cloth on top of them, and carefully shove, not pound, ⅛-inch wire brads through the strip and down into the frames.

If it is warm weather, and the bees are to be on the road for some time, they must have plenty of ventilation. This must be regulated according to the weather. Sometimes it would be advisable to remove the cloth and put a wire-screen over the whole of the top: but, as a general thing, I pull back the cloth 2, 3 or 4 inches from the end and fasten wire-screen over this opening. Do not nail up the entrance, but put wire-cloth over that, too, which will give circulation through the hive.

If you move your bees by wagon, put a wood-rack on a lumber wagon, nail boards inside the stakes, and fill up the space about 2 feet with hay, and then place the hives on the hay, with the frames crossing the road-bed. I consider the hay better than springs.

Likes the New Form.

With the first mail of the New Year came the Bee Journal in its new form. Allow me to congratulate you upon its improved appearance; although so like the old, that nothing is lost. On the inside, among the first items, I noticed that you had *not* been receiving the Nebraska *Bee-Keeper*. This I do not understand, as a copy has been mailed to you of each issue. L. D. Silson.

York, Nebr., Jan. 2, 1891.

Mr. Stilson is the editor of the Nebraska *Bee-Keeper*, which, as we stated last week, had not put in an appearance for some time. He has our thanks for his appreciation of our enlargement.

The "Nebraska Bee-Keeper" for January, is now on our desk. Among its items of interest, we find the following:

Look out for the leaky roofs on your hives! They are more disastrous and annoying to bees, than a leaky roof would be, to you, on your own house. A good coat of paint, run well into the cracks, will generally answer the purpose.

The beginner has to commence at the foot of the hill, and learn by experience. True, he should have some knowledge of bees and their ways, in order to begin. He needs to read some good bee-book, and should take one or more bee-periodicals.

Honey-producing is a business that is especially suitable for women. They will attend to the numerous small details which are necessary; while but few men are willing to give the time that is requisite.

☞ The Iowa State Horticultural Society will meet in the Horticultural Rooms at the Capitol, at Des Moines, on Tuesday, Wednesday and Thursday, Jan. 20, 21 and 22, 1991. Programme and premium list will be sent to all applicants.

Eugene Secor, President, Forest City.
Geo. Van Houten, Secretary, Lenox.

We Club the American Bee Journal and the Illustrated Home Journal, one year for $1.35. Both of these and Gleanings in Bee Culture, for one year, for $2.15.

Bees and Grapes.—Here is more testimony from raisin-growers that bees will not puncture sound grapes. It is from I. P. Israel, Olivenhain, Calif., and is from *Gleanings* of Nov. 15. 1890. He says:

> I have seen Prof. N. W. McLain's experiments with bees and grapes called in question by some of the bee-papers. But I think I could convince the greatest skeptic of their truth and reliability. We are now picking our grapes and making our raisins. Now, friend Root, walk up into the vineyard with me. You see we are cleaning the grapes at tables. You see and hear thousands of bees on the tables, on the long line of cleaned grapes, on almost every vine around you, and flying around your head. Take this bunch of grapes. You see half a dozen bees busy on it. They are sucking the juice from the half-decayed grapes, and those that have been punctured by the birds.
>
> You know already that a bee will suck the juice from rotten or broken fruit. But here is another bunch—the grapes about as large as your best eastern plums. Every grape is as pure, perfect, and unblemished as if it just came from the hands of the Creator. Hold that up for 5, 10, 15 minutes, and not a single bee will alight upon it. Oh, yes! they will fly around it and sniff at it, but they won't alight on it. Why? Simply because there is nothing for them to get, and they won't try to pierce a grape. Now you are satisfied that no bee is going to alight on that bunch. But pull one single grape off of it, and see the change! There is a large, luscious grape at the top—near your hand. But, hold! Have your mouth wide open and ready to shut the door when the grape goes in, or you may have a small family of bees in there too. You must do this or take a walk once or twice around that grape before eating it. The moment the grape leaves the stem the bees will dash at both of them for the fresh juice. These facts which I have tested again and again, prove that bees do no injury to grapes or fruit. But yellow-jackets can and do pierce the grape. They will, in cool cloudy weather, cut the cheese-cloth into shreds and go in and destroy grapes or raisins.

◆

We Learn that the East is to have another new bee-paper, to be called "The Bee-World." It is to be located very near to the *American Bee-Keeper*.

Affiliation and Strength.—About the forming of local associations, Mr. E. R. Root says:

> Right here I wish to urge upon all our readers the necessity of forming, if possible, local associations. Make some prominent bee-keeper its president, and some other one, equally prominent, it may be, its secretary. After that, you can organize a good rousing society, and see what a nice lot of people bee-keepers are. Oh, yes! after you are well organized, affiliate with the North American Bee Keepers' Association.

We fully endorse the above and hope that associations will be formed in every locality, who will affiliate and thus help to make a strong National organization,

◆

To Connecticut Bee-Keepers.

What has become of the bee-keepers of Connecticut, that we do not hear more from them? Come, wake up, and let us hear from you, and what has been your experience during the past season. It has been the poorest one that I have experienced for many years. I began the season with 3 colonies. These gave but 2 swarms, and produced but 50 pounds of honey; all but 5 pounds of which, I extracted. I put my 5 colonies, and one which I exchanged for honey, in their Winter quarters about Oct. 10, and fed them 14 pounds of sugar syrup, or all they would take. As other bee-keepers are writing of the premiums awarded them at fairs for goods displayed, I will mention a few that I have received: Among the numbers were first premiums on bees, hives (Simplicity), an extractor, and other supplies; also second premium on comb-honey—extracted-honey by accident being left out. Would it not be a good idea for the bee-keepers of this State to form an Association for mutual benefit, and an interchange of ideas?

Edwin E. Smith.

Watertown, Conn., Dec. 24, 1890.

◆

The Apiculturist, for January, comes to hand just as the Journal is all ready for the press. It comes up as "bright and rosy" as a *June* morning. We congratulate Bro. Alley upon its interesting contents and excellent appearance. It has 16 pages and a cover, and costs 75 cents a year. It will be sent for one year with the American Bee Journal for $1.65 for both.

Southwestern Wisconsin Convention.

As it is always pleasant to look upon the countenances of those we read about, we present on the opposite page the reproduction by the half-tone process of a photograph which was sent to us by Mr. France, sometime ago. This engraving was made for *Gleanings*, and kindly loaned to us by friend Root. The following is the official notice calling the next meeting:

> The next annual meeting of the Southwestern Wisconsin Bee-Keepers' Association will be held in the Court House at Lancaster, Grant county, Wis., on Wednesday and Thursday, March 25 and 26, 1891. Full particulars will hereafter be given in regard to railroad and hotel rates. A complete programme will be published as soon as it is completed. There will also be a question-box, free to all, in which any questions may be put, and they will be discussed to the satisfaction of all. Let all who are interested in bee-culture, and wish to join with us, make an extra effort to be present. BENJ. E. RICE, *Sec.*
>
> EDWIN PIKE, *Pres.*

When looking at the faces presented in the engraving, just notice the numbers on each person, which refer to corresponding numbers as herein enumerated:

1. James Armont, Argyle.
2. John Hohmann, Durango, Iowa.
3. Mrs. N. E. France, Platteville.
4. Frankie France, Platteville.
5. N. E. France, Platteville.
6. Miss Ida Smith, Darlington.
7. Mrs. E. Pike, Boscobel.
8. Mrs. W. Bailie, Lancaster.
9. Mrs. H. Gilmore, Georgetown.
10. Mrs. M. M. Rice, Boscobel.
11. Mr. R. K. Jones, Boscobel.
12. Ben. Rice, Boscobel.
13. H. Evans, Wauzeka.
14. E. France, Platteville.
15. E. Pike, Boscobel.
16. Mrs. R. D. Wilson, Platteville.
17. Mrs. H. C. Gleason, Lancaster.
18. Mrs. E. France, Platteville.
19. William Kaump, Cuba City.
20. R. L. Clark, Georgetown.
21. John Clark, Potosi.
22. Joseph Patzner, Potosi.
23. Charles Patzner, Potosi.
24. Henry Franke, Potosi.
25. G. W. Kendall, Boscobel.
26. R. D. Wilson, Platteville.
27. John Kemp, Jamestown.
28. R. K. Jones, Boscobel.
29. L. C. Fuller, Dubuque, Iowa.
30. W. H. Prideaux, Bloomington.
31. William Seeman, Boscobel.
32. James Harker, Argyle.
33. W. J. Bailie, Lancaster.
34. H. C. Gleason, Lancaster.
35. Austin Dexter, Boscobel.
36. M. M. Rice, Boscobel.
37. Henry Clark, Potosi.
38. John Kemp, Jamestown.
39. A. E. Cooley, Mt. Hope.
40. Mr. McLean, Platteville.
41. Delos Ricks, Boscobel.
42. George Fox, Big Patch.
43. H. C. Gilmore, Georgetown.
44. J. L. Lewis, Dubuque, Iowa.
45. James Wisdom, Boscobel.
46. J. W. Van Allen, Haney.
47. E. D. Peake, Jamestown.
48. Norman Clark, Potosi.
49. Seaman Howe, Platteville.
50. Martin Oudyn, Platteville.
51. Walter Pretts, Platteville.
52. Charles Nye, Jr., Platteville.

This is what friend E. R. Root says in *Gleanings* for Dec. 15, about the picture:

> Why, it is inspiring to look upon those faces, and there are several of them that form quite a pleasant study. The natural poise of most of the figures, and the depth of expression of the faces, is most excellent.
>
> Of course, the reproduction of the above is not quite equal to the photograph, but you get nearly the effect by holding it a little further away than the average reading distance, say about 14 or 15 inches.
>
> There, now, notice particularly No. 14. Why, that is our old friend and veteran bee-keeper, and valued correspondent, E. France. Then in the foreground, No. 5, is Mr. N. E. France, and Master Frankie France beside him. The light was a little too strong for his eyes, evidently.
>
> I wonder if Miss No. 6 with the papers in her hand, was one of the essayists of the day. (The figure 6 does not show very plainly, but its location cannot be mistaken, for it is between 5 and 7.) Miss Smith looks as if she might be equal to the occasion.

Of Benjamin Franklin it has been said by one of our best historians: "Franklin never spoke a word too soon, he never spoke a word too late, he never spoke a word too much, he never failed to speak the right word at the right time."

Wavelets of News.

Ice-bound is the brooklet now,
The hills are clad in snow,
The sleigh bells jingle merrily,
And past the skaters go.

The birds have left the cheerless woods,
The boughs are leafless now,
Cold winds are blowing mournfully,
Above the glistening snow.

Bees Stinging Hens.

When there has been a good flow of honey, and it suddenly ceases, bees are excited over it, and sometimes are ready to sting anybody and anything that comes in their way. Last year, at the close of the basswood harvest, mine attacked a coop of broody hens. Seeing a commotion among these cackling aspirants for motherhood, I divined the cause, and opened the door, when the hens made a "bee-line" for the protection of the raspberry bushes. The cat made frantic leaps into the air, with his tail somewhat resembling a rolling-pin. When bees are cross it is folly to open a hive.—*Prairie Farmer.*

Honey Imparts Strength.

The effete stomachs of this generation do not relish honey. In the days when men had physiques, and women were Dianas, honey was an acceptable food. Milk and honey made a concord ordained by Nature. Honey is pure; nutritious; rich. No perverting cook intervenes to spoil it. Fresh from Nature's hand it comes to us, served in the natural comb which surpasses China in delicacy, and of a consistency and color unattained by any wine.—*Western Apiarian.*

Candy for Bees in Winter.

It often occurs that Winter overtakes us with colonies that lack food. In such cases we cannot possibly use syrup for food, as the weather is too cold for the bees to seal it over, and unsealed stores will not serve properly for Winter. The moisture which always arises from the bees in cold weather, enters the unsealed honey and dilutes it, making it very unwholesome. Our only resort, therefore, for feeding in cold weather, is to make candy and use it. This is a very good and healthful food, if properly made and administered.

It is made from granulated sugar by melting it, adding a little water—no more than will thoroughly melt the sugar—when it is boiled a few minutes and poured out into cakes or slates of 3 or 4 pounds each. When cool this becomes very hard, almost like rock-candy.

In feeding this, it is placed on frames just over the cluster of bees, where they can have access to it at all times. When in this position it receives the heat arising from the bees and they remain on it all the tlme. It is so hard, that it will last them a long while. This candy may be given to the bees at intervals during the Winter, and colonies may be brought through in good condition which would have otherwise perished.

This, or any other work that is necessary to do with bees in Winter, should be done on warm days. It will not do to molest them on a cold day, but it should always be done on days when the bees are flying.—*American Agriculturist.*

Bees in the Greenhouse.

A writer, on "raising plants under glass," says that the plants must be jarred when in bloom to insure fertilization. Has he never heard of the natural fertilizers of flowers—bees?

The jarring of plants does not assist their growth nor increase their productiveness. Fertilization by hand is unnatural, and always unsatisfactory. There is a better and surer way. Let bees be the fertilizers of flowers, if a full crop is desired. The bees will do this under glass, as well as in the open air.

Since cultivation under glass became general, and an increased demand for early cucumbers and tomatoes sprung up, there has been a demand for bees solely for the purpose of fertilization of flowers.

Every greenhouse is open at least once a day in early, cold Spring, for ventilation. At this time, when there is still a sharp edge to the wind, when there are few if any flowers in the fields, the bees will enjoy the Summer warmth of the greenhouse, and go to it and spend all the time in it.if there be a place to enter and the weather is favorable.

They frolic in the sunshine, and perching on leaves, sip the water left by the sprinkler, and attend to their regular duties, namely, collecting pollen for the young bees, fed to them mixed with honey.

This gathering of pollen from the greenhouse flowers causes the fertilization. It is complete and thorough, for in early Spring when outside flowers are few, the greenhouse pasture is the only one, and hence no flower can escape; every flower is visited many times probably.—Geo. A. Stockwell, *in the Country Gentleman.*

Bi-Sulphide of Carbon for Ants.

Try the bi-sulphide of carbon as a remedy for red ants, so often mentioned by Prof. Cook. Directions: Pour about a pint into the hole; cover for about a minute, then explode the vapor that has formed, by burning a rag tied to a stick, and close up the hole air-tight. They call it ant-poison here. It is excellent for killing night-ants or cutting-ants.—R. Westphal, *in Gleanings.*

Will Freezing Injure Foundation?

Freezing will do no harm at all, providing some inconsiderate person does not attempt to handle it while it is cold.

Persons who ought to know better undertake to move comb-foundation when it is almost icy cold. Of course, it flies to pieces like thin glass; and then, after they have done a lot of mischief, they sometimes undertake to repair it, and in so doing, they break a lot more of it.

Never touch foundation, nor even hardly look at it when it is in a cold room. Air and light have the effect of bleaching and hardening thin foundation, and as this makes it a little more difficult for the bees to work, it is generally considered better to have your foundation shut up in a box, protected from air and light as much as possible during the Winter time.—*Gleanings.*

Official Report.

The 21st Annual Report of the North American Bee-Keepers' Association has just come to hand from the publishers, Messrs. Thomas G. Newman & Son, of Chicago, Ills. As usual, it is well and neatly printed, and substantially bound in a tinted-paper cover. One thing we notice in particular in regard to this report is, that it is nearly twice as large as any other report of one convention. The Keokuk report occupies 50 pages, the size of this; the one at Columbus, 26 pages; the one at Brantford, a year ago, 28 pages. Every member will have a copy of the last report, and a good many who are not members should have it. Price, 25 cents each, or to members free. —*Gleanings.*

No Artificial Comb-Honey.

Many people confound comb with foundation. Artificial comb, like artificial eggs, has never been practically made. Had it been, it never could have been filled with honey or any manufactured substitute, and then capped over. The impossibility of this is plainly apparent when it is considered that it takes about 800 thicknesses of the wax, in the side walls of the cells, to make an inch in thickness, and that the cells are built with an upward incline, evidence of which is readily seen upon cutting a comb in two. Machinery could not be made to work so delicate an amount of wax, or form cells of such a peculiar shape and position.

Foundation is no more a comb than it is a board, until the bees have re-manipulated it, added to it, and again made of it, a comb.—H. L. Jeffrey, *in Home-Farm.*

Granulation of Honey.

It is practically easy to understand how honey from one kind of flower granulates sooner than that from another source; or how it is that honey from one district, or in another season, shows a greater readiness to crystallize; but when one is brought face to face with the problem: "How is it that one bee-keeper's honey, got in the same season, in the same district, candies sooner than his neighbors?" the matter cannot be so readily dismissed.

We must first think of nectar as simply a solution of cane sugar in water, the amount of sugar and chemical peculiarities varying, of course, with the kind of plant, with the wetness of the season, and also with the humidity of the air at the time of the nectar-flow (electrical influence is, for the moment, out of the question).

The business of the bee is to gather the nectar, remove some of the water by the help of its own system, and by the help of a salivary ferment, convert the cane into grape sugar; by adding formic acid to the honey, regurgitated into the cell, its further fermentation is arrested, and its keeping-quality well assured, after still more surplus water is allowed to evaporate, before the bee seals it up in the cell.

The honey is still, one-fifth of it, water; two-fifths of the rest is dextrose, or crystallizable sugar, with two-fifths levulose, or non-crystallizable. Extracting honey before it is all ripe, will, we know, throw out some bearing an undue proportion of water in it, this having a tendency to retard the candying, but we shall throw out nearly all the dextrose, which increases this tendency.

If, however, one waits until it is all sealed (good, ripe stuff), when it is extracted, a certain portion of the crystalline sugar remains in the cell, and thus gives out a greater share of levulose (non-crystallizable) sugar. Such honey naturally holds out longer in a clear, fluid state.

If I had to decide between A and B in the same district, A having readily-candying honey, whilst B's remained fluid, I should say B extracted only from sealed combs, whilst his neighbor was not so particular. If this was not the case, my alternative would be, that the bees of A had easier access to water, thus allowing the crystalline sugar to be more readily slung out of the cells. I am presuming that A keeps his honey in as warm a place as B; if not, there is really no question at issue.—R. A. H. GRIMSHAW, *in the Record.*

Order Supplies Early.

Let us impress upon every bee-keeper the importance of placing an order for next season's supplies at an early date. This will relieve to a certain extent the rush of orders which always comes in May and June, and the experience of the past season, when all the dealers were behind, and some of the oldest and largest of them could not fill small orders in less than 3 weeks, which necessarily entailed a loss upon those customers who waited until the last moment. Every honorable dealer is anxious to furnish his customers with just what they want, but it is impossible for him to do it, at all times, when the year's business is compressed into 3 or 4 weeks.—*Exchange.*

Syrup for Feeding Bees.

Syrup for bees can be made of any of the cheaper grades of sugar, but when feeding for Winter stores, by all means use the best grade of granulated sugar. Take, say 12 pounds of sugar and 4 pounds of water, and bring it to a boil; this will make a syrup of the proper consistency.

I have repeatedly tried tartaric acid to prevent the granulation, but have not been able to notice any benefit, and do not recommend it; however, if about 2 pounds of extracted honey is stirred in as you lift the syrup from the fire, it will do more to retard granulation in the combs than anything that I know of; it will also impart the honey flavor to the syrup, thus making it sought after by the bees. I notice that some of our friends entertain the idea that by adding more water to the syrup it will go farther.

This is an erroneous idea; the bees will evaporate the water and reduce it to a thickness consistent with keeping qualities. If the bees were deprived of this faculty, watery sweets would become sour and rancid in their cells.—*Indiana Farmer.*

Memory in Bees.

I was living in a town where I knew some few bees were kept, and I chanced to have some comb from which the honey had drained; and so, instead of being greedy, and squeezing out all I could get, I determined to give a feed all around to such bees as chose to accept my invitation to dinner. This invitation I gave by opening the window, and putting the honey on the sill. In about half an hour some foragers found it out; they helped themselves, and carried back the good news to the sisters in the hive. In the course of the morning my room was literally swarming with bees, and I need not tell you, as they are grateful creatures, that they did not meddle with me, but, as I sat at my books, repaid me for my treasure with their sweet music.

In the afternoon they were satisfied, at least for the day, and dropped off, one by one, without doing any injury.

There is nothing strange in all this; but now comes the interesting part of the story: I myself got up the next morning, some time before the bees are usually stirring, and, as I went to my window (it was in September) to see the first rays of the sun in the eastern sky, I was much surprised, and not a little delighted, to see a number of bees who had remembered and been grateful for the dinner the day before, waiting for me to let them in to a similar breakfast.

As some of the honey was left, you cannot doubt but that I complied with their wish, which was clear enough to me, though they had no tongue to express it. I opened the window; the room was soon filled; they cleared the combs of honey, and then went orderly away.

They haunted my windows for several mornings after, though I had no more honey to give them. This is, I think, a pretty strong instance of memory in bees.—*Spare Moments.*

North American Association.

I cannot refrain from saying that this meeting was one of the best, if not *the* best, in enthusiasm, good-natured banter, in attendance, in the *practical* character of the discussions, in the character of the *men* and *women* who went; and last, but not least, in the *business* done, and recommendations made—in the history of the Association; and I hope this is only a side-show of the good times coming, when the Association shall be incorporated under the laws of Illinois, and when the membership, instead of its present floating character, shall be permanent, with a long list of life-members, and annual members, who will keep up their dues, whether present or not.—E. R. Root, *in Gleanings.*

Laws on Bees in Germany.

We, William, King of Prussia, etc., decree throughout our Monarchy, by sanction of both Houses, the following, to wit:

1. The privilege of bee-keeping to all inhabitants on their own property.

2. The same right to all renters or leaseholders, by permission of the owners of the property.

3. Apiaries may be established anywhere against objections of neighbors, by enclosure of at least 2½ metres high; from April 1 to Oct. 1, 10 metres high (this is in case of neighbors objecting).

4. Moving apiaries to forests, buckwheat fields, or any other pasture, each must respect a distance of 200 metres, and 25 metres from any public highway.

5. Near bleaching, dyeing, or tannery establishments, the distance of 50 metres must be observed.

6. Apiaries will be protected by civil right and law.

7. The swarm issuing is the exclusive property of the owner of the parent colony with the right to capture the same, wherever found, without trespassing.

8. An absconding swarm is ownerless, as soon as sight is lost of the same.

9. Such swarm will be the property of the capturer.

10. In case of swarms uniting, each rightful claimant has a joint interest in the same; but in case of a disagreement, decision will be made by arbitrary lot, or sale of same, dividing the proceeds according to the interest of each.

11. If a swarm enters a hive of any other apiarist inhabited by a colony of bees, all claims on the newly entered swarm by its former owner cease at once.

12. All transgressions of rules 3, 4, 5, will be punished by a fine of 150 marks, or 6 weeks' imprisonment.

13. Any one who wilfully or maliciously in any way destroys (so-called) robber bees by water, fire, steam, or poison, or trap, shall be fined 600 marks, or an imprisonment for 1 year.

14. A fine of 600 marks will be imposed on any one who sells bees, hives, products, or implements infested by foul brood.

15. A fine of 60 marks, or imprisonment for 2 weeks, will be imposed on any one who (*a*) recklessly sells or gives away hives, boxes, products, or implements, etc. (*b*) Who carelessly, in his apiaries, sets up such colonies, or leaves scattered about combs so infected. (*c*) Who neglects to remove foul-broody, infested hives, or close the entrances of the same.—*Bienenzeitung.*

Murdering the Bees.

Only a few days ago one of my neighbors spoke to me about some colonies he had bought at a sale. He paid $20 for 10 colonies. He intended to kill the bees and sell the honey, to make a profit on the money paid for them. After a little talk, I persuaded him to "let them live." I told him that if they had enough honey to bring $20 or more, they had enough to winter on, and that $4 each next Spring would be very low for them.

Whoever heard of such a thing as a man killing a hen to get the eggs, or killing a cow to get her milk. Killing bees to get honey is just as foolish. If your bees have failed to store enough to winter on, and you cannot afford to buy sugar to feed them, then, through sympathy, kill them, rather than see them starve to death. But if the bright, intelligent, "busy bees" have worked and toiled all through the hot Summer, through thick and thin, saving enough to live on through the long, dreary Winter, for pity's sake let them live and enjoy the results. Encourage industry, for it is "by industry we thrive."

Study the habits of your bees, you cannot help but love them; especially the gentle, intelligent, yellow Italians.—*Prairie Farmer.*

Kerosene for Propolis.

The handiest way of getting propolis off the hands is to have a small cup of kerosene handy. A few drops will "cut" the gum very satisfactorily.—*Gleanings.*

Queries and Replies.

Surplus Supers for Comb-Honey.

QUERY 747.—What kind of cases do you use in working for comb honey ?—L. J.

T-supers.—C. C. MILLER.

T-supers.—J. M. HAMBAUGH.

T-supers.—H. D. CUTTING.

Heddon cases.—MRS. L. HARRISON.

Wide frames.—G. M. DOOLITTLE.

Surplus cases, of course.—C. H. DIBBERN.

4¼x4¼x1⅞ inch, in broad frames.—J. E. POND.

I use the Doolittle surplus arrangement for comb-honey.—P. L. VIALLON.

The Heddon case, and also a case holding single-tier wide frames.—R. L. TAYLOR.

I have used a good many. I like the simplest T-super that can be made.—EUGENE SECOR.

The Heddon case and the T-super; and I like them both. I have also used some of Heddon's supers with broad frames.—A. J. COOK.

The old-style Heddon case without separators, the Heddon wide-frame case, and the T-tin case with separators. I use all of these every year. Where no separators are used, I think my old style case unexcelled.—JAMES HEDDON.

The Nonpariel section-case for wide frames and wooden separators. The separators are put in loose, and the removable side of the case is clamped by the use of clasps, so as to bind all together solidly.—G. L. TINKER.

My surplus cases are made ¼ inch deeper than the heighth of the sections, in order to allow a bee-space under them. I can tier up one case on top of another, if required. By this arrangement sections of different widths can be used in the same case.—J. P. H. BROWN.

I use a section-case just the size of the top of the brood-chamber of the hive used. So that it fits on top of the brood-chamber with a square joint. The case is made ⅜ of an inch deeper than the depth of the section used. Some of the cases have skeleton wood partitions, and some of them have T tin rests. The latter I always use, if separators are to be used; otherwise I prefer the skeleton wood partition support. I divide the mechanical bee-space half at the top and half at the bottom of the sections. This enables me to put the section-case either top or bottom down, without smashing the bees or soiling the sections.—G. W. DEMAREE.

On the bottom of the case, slats, the width of the sections, are nailed, with openings like those between the sections. On these, strips of wood are laid, for the ends of the sections to rest on, leaving a bee-space between the slats and the bottoms of the sections. This arrangement is equivalent to a break-joint slat honey-board, and works very well.—M. MAHIN.

Pollen-Gathering Drones.

On page 811 may be found a question propounded by the writer, relative to drones gathering pollen and honey. At the time the question was asked, I was well assured that practical bee-keepers would smile at the apparent verdancy of the questioner—it being a well-established fact that drones gather no pollen or honey. My attention was called to an unusual noise in my apiary, about the middle of the honey flow, during the last season, and, upon an examination, I found a large number of drones (as I supposed) going from and coming to the hive; and upon a close examination I discovered, to my surprise, that they were heavily loaded with pollen on their thighs; they also had white scales under their wings. I reported the fact to Mr. J. C. Hendricks, a practical bee-keeper, who said it could not be possible. But I still affirm that I am not mistaken; for what I have seen, I know. The bees were at least a third larger than the worker-bees, hence they are pronounced pure drones by Mr. Hendricks.

Decatur, Ill. R. T. DAVIS.

We have often seen worker brood in drone cells, and once at least, we remember witnessing the emerging of worker bees from such comb.

It is not very uncommon to find drone cells (where drone-comb is too abundant) with the cells somewhat contracted by a heavy rim of wax around the mouths thereof. These cells are of course used for worker eggs, and the bees hatched in them are sometimes larger than ordinary workers, and may have been taken for drones in the above peculiar case, noticed by Mr. Davis. It may rightly be called "a freak of nature," in any case.

Topics of Interest.

How the Bees are Wintering.

JAMES HEDDON.

Some may be interested in my report from north latitude 42, that our bees were flying lively on Dec. 23. There is no snow on the ground, and bee-men around about here are happy. I am wintering about 350 colonies, some 60 of which are in the cellar, and all the rest out-doors; these are securely packed in dark red wintering boxes.

The Winter now so well advanced, having been so mild, I think the out-door bees will come out ahead. However, the 60 colonies in the cellar, which have been in about a month, are at this time exceedingly quiet.

Many of the older readers of the AMERICAN BEE JOURNAL will remember about the "Heddon pollen-theory," and the radical opposition to it, which seemed to come, more than anything else, from jealousy as to who would be the first to discover the cause of bee diarrhea. There are now many younger bee-keepers and new subscribers who have heard very little regarding this theory, which I think I may say, is now a practical, settled science.

In consideration of the foregoing, it may not be out of place for me to say a few words regarding the consumption of pollen during Winter confinement as being the sole and direct cause of bee diarrhea, compared with which all other causes of Winter losses amount to nothing. To begin with, the excreta, every time it is analyzed, proves to be almost wholly and clearly undigested pollen.

It is also well known that bees, not only winter better, but much safer, when not one drop of pollen is in the hive. It is also a fact that a large portion of honey gathered in some seasons, is well filled with floating pollen, very thin, but still visible to the naked eye. This year there seems to be plenty of bee-bread in the hives, but the honey appears quite clear and free from floating pollen.

Now, if we keep our bees in such condition, that no special temptation to pollen-consumption is present, I believe they will winter well. It is well known that a low temperature is the prime cause of bees consuming pollen; the cold stimulating them to exercise, which results in a waste of animal tissue, and this waste quickly prompts the bees to make it up by the consumption of nitrogenous food (pollen), which clogs the intestines and produce diseases where long confinement follows. At this time, we have a right to hope that neither one of these conditions will be experienced with our bees, wintered either out-doors or in special repositories.

I desire to impress upon the younger readers of the BEE JOURNAL, the fact that Prof. A. J. Cook, in connection with the Michigan State Chemist, Professor Kedzie, has several times analyzed the excreta, and found it pollen first, and pollen last. I saw, years ago, and I will here say that everything coming under my observation since that time has only gone to confirm the theory (nay, the truth) that this pollen-consumption is the one and only great cause of the Winter malady, which has decimated the bees in the Northern States, year after year, as well as the pocket-books of our most enterprising bee-keepers all over the country.

One of the greatest evils from which honey-producers suffer, in the way of heavy losses of bees in Winter, or light crops in Summer, or both combined is, that honey being a luxury, the price will not go above a certain point, let the scarcity be what it may. Our success demands plenty of bees, good crops and low prices, it seems to me.

Would it not be well for bee-keepers all over the United States to commence to report regarding the present condition of bees, the kind of weather they have been having, that we may begin to estimate what the results of wintering will be throughout the country?

Dowagiac, Mich.

When and Why do the Bees Die?

REV. DR. JOHN DZIERZON.

Every one knows that during the time when the fields are full of flowers young bees are hatched in all healthy and populous colonies daily, not by hundreds, but by thousands; every parent colony, as a rule, giving off the first swarm, and one or more second swarms, in which the work of increasing the population is carried on in a similar way as in the parent colony. If this went on continually, the hives would soon be incapable of holding the large number of bees forming the colonies, and the country would in a short time be unable to support the number of colonies of bees in the different districts.

But as it has been ordained that trees shall not touch the sky, so it has also been wisely arranged that the number of bees in a colony, and the number of colonies in a country, shall not increase excessively; for quickly as bees make their appearance, they die off just as rapidly.

It is well known, when and how the largest number of bees and colonies originate, but it is not so generally known (because it does not strike us so forcibly) when and in what manner most bees die. A discussion of this subject might not therefore be without interest to bee-keepers.

BUT FEW DIE A NATURAL DEATH.

Very few bees, indeed, die a natural death, from the infirmities of old age, unless we regard as natural, that kind of death which finally overtakes them, through the inability of their wasted wings to carry the weight of the body any longer, when (especially during high winds) they fall fatigued to the ground at some distance from the hive, and perish.

When incessantly at work, in the Summer, the life of most bees does not exceed six weeks; but during the period of rest, in Autumn and Winter, and in queenless colonies, there is little or no change in their appearance, and they may then live for 9, or even 12 months; of this any one may convince himself by allowing a colony to remain without a queen.

MOST BEES DIE PREMATURELY.

The largest number of bees are destroyed by their greatest enemy, the cold, partly inside the hive, and partly in the open air.

We all know that many bees die on the snow, especially when loose, and of a dazzling, white appearance. They fall to the ground and remain there, not only near their hives, but frequently at a considerable distance from it, as many a bee arriving half-chilled will rise again and be borne away by the wind as long as it is able to move its wings. In the direction in which the wind blows, the greatest number of bees may therefore be discovered, lying on the snow.

Large numbers of bees perish in March, and even in April, at which time they show an extraordinary desire for fresh pollen, which induces them to rush out of the hive every time the sun appears, and to venture on long excursions, during which they get chilled and fall to the ground, when the sun is hidden behind the clouds, or when the wind is getting cold.

In spite of breeding, the loss of workers at this time of the year is frequently so large as to make the colony appear weaker at the beginning of May, than at the beginning of March.

In May and June, however, the population of every healthy colony increases from day to day, because the air has now become so warm that bees do not easily get chilled. When the sun rises to the highest point in the sky, our colonies, as a rule, have the largest population; so large indeed do they become that in many hives there is scarcely room enough for all the bees, and a part of them are obliged to remain outside the hive day and night.

But when the days begin to shorten, and the honey sources become scarce, the bees of the colonies which have remained undivided, decrease at the same rate at which they increased previously.

Now, how is this visible loss in population to be accounted for, as on account of the still high temperature, but few bees get chilled, and being less active now, they do not get worn out so quickly?

Most of the bees which perish at this time, doubtless, become a prey to their numerous enemies. The number of bees snapped up by birds, is exceedingly small compared to the number destroyed by their small, but more numerous enemies, the field spiders, hornets and wasps. The latter, which increase enormously if favored by warmth and dry weather, destroys an incredibly large number of bees, especially in August.

A good many bees, especially old ones, in their anxiety to collect as much honey as possible, no doubt venture upon long excursions to distant moors, when no longer any pasture is to be found near the apiary, and overtaken by contrary winds, or rain, are unable to return to their hives.

SOME ARE CHILLED IN THE HIVES.

We know that some bees, and often a great number die inside the hive, the cause in most cases being their not following the gradual contraction of the cluster of bees when the temperature is falling; but especially when, as often happens, cold weather sets in suddenly; they get chilled and die, unless restored to vitality by the application of heat within 24 hours.

Baron von Ehrenfels, who had an intimate knowledge of bees, was in the habit of placing his straw hives in rows between boards in Winter, and to fill up the empty spaces between with some warm material. I consider that such a precaution here is quite superfluous, but by no means injurious to the bees; for the less heat that escapes unnecessarily, the more economically and healthily will bees winter, and the longer will they be able to delay from flying out.

It is of course necessary that there should be a sufficient supply of fresh air, for as a fire in a stove becomes extinguished when oxygen is excluded; all generation of heat, and life itself, in the bee-hive ceases when all the oxygen has been consumed. Ay, there's the rub! The want of air fit for breathing, and perhaps also of water, is the cause of bees becoming restless, which ignorant and superficially-informed people attribute to excessive heat.

But even should the irrepressible impulse of bees to cleanse themselves be the cause of the restlessness in a colony, which is quite imaginable, it will in any case be advantageous to keep bees sufficiently warm and active to enable them to get to the entrance and cleanse themselves there, instead of being obliged to do so, half-chilled, in the cluster, which would almost certainly cause the immediate ruin of the colony.

We know very well, that as long as bees are able to get at their stores of honey, they can stand severe cold; and, if examples are mentioned of bees having wintered well in high northern latitudes, this proves nothing against the expediency of providing as much protection against the cold as possible.

Some Italians, who accompanied the Austrian Polar expedition, survived the fearful Winter of those cold regions, without any apparent injury to their health; but no sensible man can possibly doubt that they would have felt much more comfortable in their own native country, where the climate is mild.

For bees to be obliged to draw closely together, to tremble with cold, and to pipe in a higher key, has always to be considered an evil which a sensible and careful bee-keeper will endeavor to guard against, as much as possible. Though he cannot procure for them the mild air of Italy, he should at least make their Winter-quarters as warm as possible, in order to lessen the injurious effect of the cold.

There can be no objection to reducing the number of combs moderately in the Spring, and after a colony has done swarming, when the bees are able to renew them in a short space of time, which they evidently do with eagerness; and I myself frequently have recourse to this means, in order to obtain guide-comb; but to destroy, in Autumn, the Winter-quarters which the bees have arranged for themselves, and to expose them during a long Winter to the direct influence of a fierce cold; and, finally, to advocate destroying bees by brimstone, is a barbarism of which societies for the protection of animals should inform the police, in order to have the offenders punished!

Want of water afflicts, and even ruins, many colonies, when obliged to consume candied honey, or honey which has become very thick.

DISEASE FROM FOUL-BROOD.

But more dangerous than candied honey is the honey gathered from fir and pine trees. When bees are able to fly out, it does not appear to affect them injuriously, but if compelled to use it exclusively, at a time of extreme cold, in the Winter, there is a great risk of its doing them harm. Such honey being slimy, capable of being drawn out in the shape of a rope when the temperature is low, appears to be almost insoluble in the absence of water, and less nutritious and warming than other kinds of honey, for which reason a large quantity of undigested matter is retained by the bees in their body, which generally causes diarrhea when bees are confined to their hives for some considerable time.

After a long and severe Winter thousands of colonies die of diarrhea, which disease is quite unknown in Southern countries, where the Winter is mild and of short duration.

QUEENLESSNESS IS FATAL.

The number of colonies which perish from queenlessness every year is also very large; for if an old queen dies in Autumn or Winter, or a young queen is lost during her wedding trip, or if she remains unfertilized, the bees in the hive, sooner or later, disperse, or the colony becomes a prey to bees from other hives.

According to the opinion and experience of Baron von Ehrenfels, the number of colonies of wild bees which perish through having lost their queen is greater than those which die from starvation, as he infers from traces of drone-brood which he discovers.

As, however, districts and seasons vary considerably, we may expect to find a great difference in this respect.

STARVATION.

During a Winter, preceded by a season unfavorable to bees, it is very likely that more colonies will die from starvation than from queenlessness.

After a favorable season, when the colonies are plentifully supplied with food, the bee-keeper need not be concerned about his bees; but after a bad season, it is necessary to watch the bees and examine them frequently, in order that repentance may not come too late.—*British Bee Journal.*

Cause of Bees Freezing to Death.

G. M. DOOLITTLE.

I see by one of the papers that it is thought by some that bees often freeze to death during the Winter, and that the cause of our wintering trouble is largely due to the fact that there are no holes or Winter passageways through the combs so, that as the cluster contracts during extreme cold spells those bees which are on the outside of the cluster do not or cannot keep up with the cluster, so are frozen to death. In this way, after each warm day during the Winter, hundreds of bees freeze till the cluster is so reduced that the whole freeze together.

I think that such is a mistaken idea, and do not believe our wintering trouble is caused by bees freezing, but it is caused by the bees getting in an abnormal condition from many of the various causes brought about by long continued cool or cold weather, which they do not have in their native or warm climate.

From many observations I find the following to be a correct state of affairs inside of the hive when the bees are in a normal condition.

As Fall approaches, if we examine a colony of bees we find that the activity manifested during the Spring and Summer, in the interior of the hive, becomes less and less, so that by the middle of October, in this latitude, all brood rearing has ceased and the bees have become partially dormant: still so far, they have not packed themselves away in a snug cluster, or compact shape, for Winter. Every opportunity given by a warm day is improved to void the feces, so the bees may be prepared for a long cold spell, when such an one occurs.

As the weather grows colder, the bees contract their cluster, many packing themselves away in the cells till the smallest space is occupied by them, and thus the requisite warmth is secured to keep them alive when the mercury sinks below zero.

In this contraction of the bees (at certain times) many of them are left singly or in little clusters of from 5 to 10, which do not recede with the main cluster, and thus are chilled where they are, and if the weather becomes cold enough, they may be frozen, thus losing to the cluster that number of bees.

The reason for this, as formerly given, and more minutely outlined than the above was, that owing to the movable frame, no cross-sticks were used, as was the case in the box hives, and hence the bees left no holes in the center of the combs as they did around the cross-sticks, thus compelling the bees to pass over and around combs of cold honey, to keep pace with the receding cluster, instead of passing through the center of the combs to the next range which was more nearly filled with bees; and because of this, many bees were frozen.

To obviate this, the Langstroth frame, and others, were provided with a shaving bent to form a circle an inch in diameter, which was suspended from the top bar by means of a little strip of tin, supposing that this would effectually secure a passageway for the bees. However, but a short time elapsed before it became apparent that during a good yield of honey this shaving would be filled with comb and honey, and hence the passageway was cut off.

Next, the practice of cutting holes through the combs each Fall, by various means, was resorted to, only to be filled up the following Summer, when, as Winter approached, the process had to be repeated again.

After trying all these plans, it became apparent to me that the reason assigned as the cause of the death of the bees was not the real trouble, for bees would stay and die within one-half of an inch of these holes, when it would appear that they could have passed through these passages just as well as not.

I also discovered that when the weather was cool, cloudy and rainy, for several weeks before it came severely cold, that this loss was apparently much greater than when a clear, warm day occurred, immediately before a severe cold spell. By the number of bees that were found on boards and such places, dull and stupid, after such a fine day, I concluded that these were the same bees that would have died by not following the cluster, had not a warm day occurred for them to leave the hive to die; hence, I say that the loss was apparently greater when no such day occurred, for many more bees were seen outside of the cluster dead, as they had no chance to get outside of the hive to die. After years of experience, I believe the above to be a correct solution of the matter.

When being fully settled for Winter and this loss of old bees has passed away, a colony will lose but few bees for 6 weeks or 2 months, and will remain quiet. If at this time a warm day occurs so they can fly freely, they again cluster back quietly, and remain so, about the same length of time, when they again desire to fly, and if such a chance occurs, all will go out, and the bees Winter well.

Thus we have a colony in a normal condition, and all the cold ever obtained in any portion of the world where bees can be kept with profit (occurring during this period between their flights), will not materially injure them if they have plenty of stores within easy access. In years gone by, I have purposely prepared very small colonies or nuclei to test this matter, and I find that colonies which do not occupy more than one-fifth the room occupied by an ordinary cluster or colony, will safely pass through a spell of cold weather, during which the mercury sinks as low as 20° below zero.

To test the matter more thoroughly, I once raised a hive, having a small colony of bees in it, off the bottom-board a foot or more, and took off all the covering from the top, leaving them thus during a night in which the mercury went down to 15° below zero, yet in the morning they were all right as far as I could see, and came through that Winter in excellent condition.—*Rural Home.*

The Closed-End Frames.

W. P. FAYLOR.

Much is now being said about "closed-end frames." I have experimented some with frames so made that the end-bars were each an inch-and-a-half wide and half-an-inch thick, with top and bottom bars just alike, so as to admit of either side of the brood-chamber being turned up. The end-bars extending so as to allow a bee-space above and below the top and bottom bars. These frames rest directly upon the bottom-board; and two boards, as long and as wide as the frames, form the side-enclosure of six, eight, or any number of frames.

I find no trouble about separating the frames, or in the crushing of bees; but the main difficulty lies in getting something suitable for drawing the frames tightly together.

Driving a nail in the end of each board, midway, and stretching a wire doubly across, from board to board, after the Bingham fashion, will work, but not to my satisfaction. It seems to me that some kind of a coil spring might be invented to hold such frames in position.

Could we get something to hold any number of such frames together, then we could have just what we want. We could then take an eight-frame hive and use four frames above and four below, forming a double decker, and a large number of such hives can be packed in little space.

I do not think it practical to use closed-end frames inside of box-enclosures, the way we use the hanging frame. We want the closed-end frames so that we can separate any two frames by running a knife between the end-bars. This cannot be done so readily where the frames are inside of a box held by thumb screws or wedges.

The advantages of such a hive need no comment. I should like to hear from others who have experimented in this line. Let us go a little slow before we make kindling wood of our "Simplicity" frames.

State Line, Ind.

Haunts of Bees—Bee-Trees.

MRS. L. HARRISON.

There is a blacksmith in this city who is an enthusiast in bee-culture. He will get up by daylight on Sunday mornings, take a piece of bread and butter, and walk seven or eight miles to an apiary, watching for bees upon the bloom. In a recent visit I asked him if he had been to the buckwheat fields this Fall. He said that he had; but when he was there, the bees were not working upon buckwheat, as it was completely covered with wild cucumber vines, which were blooming profusely, and the bees were working upon them.

I knew that there was a flow of honey following buckwheat, but I was ignorant of the source, until this lover of Nature in her happiest moods, informed me.

BEE-TREES.

This enthusiast has made friends with some wood-choppers, who have spent their whole lives in the woods, and are always on the alert to discover bee-trees. He accompanied them lately on a bee-tree cutting expedition. He said that while chopping the tree, the bees covered him and stung him viciously, but as soon as the tree fell they left him, for they had no home to defend. The men took away a large wash-tubful of honey and two wooden pailfuls.

When they were taking out the honey from the hollow tree, they came across two large combs full of brood, that were sealed, and chipping. The bee-keeper said, "I would like that." The woodmen said, "You've a basket; what's to hinder? Take it along if you want it." So he carried it home and fastened it into frames, and gave it to a weak colony, which increased their number wonderfully. He measured a piece of comb, 5x⅜ inches square, and counted the embryo bees, and there were 585 on each side. This tree was cut during the Fall flow of honey, which was the best time of the season, and the colony had queen-cells, getting ready to swarm.

HUNTING BEE-TREES.

These woodmen do not practice baiting and lining bees, as there are so many kept along and under the bluffs facing the Illinois river bottoms, but they watch them in their flight towards the river, and from long practice have become adept in locating them.

As they walk or drive through the woods, they scan the trunks of trees, and their practiced eye soon discovers if there are bees going or returning to it, with the sky for a back-ground.

During the Winter, when there is snow, and bees clean house, the dead are readily seen upon its white surface; or bees take a purifying flight, when the trees are leafless, upon mild, warm days. They also drink the sap from fresh chips, and may be traced home among the bare trees.

Bees choose strange places for a home occasionally. In a late number of the *British Bee Journal* is an amusing account from a correspondent in South Africa, of the result of such a choice.

A Dutch farmer and his frau were getting ready to go to a neighboring village to attend sacrament. The farmer hurried his frau, as it was getting late, and entering the vehicle they drove off. Soon the frau was slapping and screaming, and the farmer and the driver beating accompaniments, and the old mokes of horses were kicking and galloping, when they drove in among the assembled worshipers. Soon the latter joined in the fusillade, and never was there such a looking crowd after the fray—big noses, closed eyes, and thick lips. A swarm of bees had taken possession under the seat, and stored 40 pounds of honey, and the jolting drove the bees out on the war-path.

FLOUR AS A PEACE-MAKER.

In England, flour is very popular, to use in uniting bees in the Fall, to prevent fighting. When they are put together, flour is shaken over them from a dredging box, and when they lick themselves clean, they are quite friendly.

Peoria, Ills.

Apiculture in Agricultural Schools.

DR. C. C. MILLER.

On page 806, C.B. Jenks speaks of the Rhode Island Agricultural School as being the only one which gives to its students a thorough practical knowledge of bee-culture. Mr. Jenks is hardly posted. Has he never heard of Prof. A. J. Cook, who for years has been giving thoroughly practical instruction in the theory and practice of bee-keeping? Does he not know that Prof. Cook has that as one of his regular duties in the Michigan Agricultural College?

SWARMING WITHOUT DRONES.

Dr. Carpenter's experience, given on page 806, shows that the absence of drones is not very reliable as a practical prevention, to say the least; and the doctor should not be very much surprised at it, after the replies given on page 740. The answers there printed show only 5 out of 19 who think such a thing impossible.

It may not be entirely safe, however, to assume that there was no possibility of the presence of drones. In a strong colony, it would take more than ordinary scrutiny to make sure that not a single drone was there. Even if, to-day, each bee marched by in single file, showing the absence of all drones, what assurance have we that one or more drones from some neighboring colony, may not have entered, by to-morrow?

In any case, we are pretty safe in saying that a colony *may* swarm, although no drone may be seen in the hive.

THAT ESSAY BUSINESS.

Friend Newman: Don't you know that if I am not with the majority, that does not prove that the majority is always right? The fact that you have many applications for essays, only proves that secretaries are anxious to secure them from you, as a good advertisement, on their programmes. Especially if those who see the programmes think that the editor of so good a journal, is likely to be present, in person.

I agree with you, that if matters are not run in pretty good shape, it may be better to have the time filled up with first-class essays, than with very poor discussions; but when it comes to that, I would rather read them in the AMERICAN BEE JOURNAL.

Marengo, Ills.

[We intended to have followed Mr. Jenk's article with a foot note, referring him to the Michigan Agricultural College, but in our very great rush of the past 2 months, it was forgotten until too late. He evidently is not as well acquainted with Prof. Cook as we are.

As to the Essays at Conventions—of course the majority are not always right, but it is pretty safe to locate with it generally. In all our popular institutions, on all questions of political economy, on all the great questions of the day, the popular sentiment and verdict of the majority control, and to it we bow with all the grace at our command. So, if essays at Conventions, are considered essential and for the best, all things considered, count us with the majority. —ED.]

Successful Out-Door Wintering.

J. H. LARRABEE.

In any discussion of the subject of out-door wintering, Vermont should, I am sure, have a voice. All over the state, but more especially in the Champlain valley, bees are wintered out-of-doors. Whether those who inaugurated this system did so with a full knowledge of all the advantages to be obtained with light hives and cellar wintering, I know not, but the fact remains that scores of bee-keepers here practice this method with scarcely a desire for a change.

Our valley is favorably situated, the cold being tempered by warm breezes from the lower Hudson region; but an examination of the meteorlogical observations of the signal station at Burlington would convince many that this effect is not too apparent.

But there are other reasons beyond the control of the average bee-keeper, why our bees winter so successfully.

The character of the honey used for Winter stores is generally of the best, as so little Fall honey or honey dew is obtained that the major part of the Winter stores, if of honey, must be of the white honey crop. This same lack of Autumn forage also renders late breeding light, and frees the combs of much surplus pollen. It is no rare occurrence to find no brood of any kind in the hives by the first of October.

Winter flights are very desirable at a proper time, but may be injurious. A good flight during December is always beneficial, but one between January 10 and the middle of February is often extremely injurious, as breeding is induced; and should no flights occur until after the first of April, as often happens, diarrhea may be the result.

If Spring protection is of sufficient importance to repay all the trouble of providing packing, then should we, who winter in chaff hives, congratulate ourselves upon having obtained this protection without an hour's extra labor.

The increased consumption of stores in out-door wintering is, I am quite sure, not as apparent at the opening of the clover bloom as on the first of April; as honey is, I contend, consumed in much larger quantities at this season, by colonies wintered in the cellar, than by those wintered in the open air.

One word more with regard to the method of packing in use here. The material may consist of almost any porous non-conductor of heat. Chaff and planer shavings having the advantages of lightness, are the general favorites. Care should, I think, be exercised that the packing be perfectly dry; that it may absorb as much of the moisture of the bees as possible; moisture being feared next to poor stores as a cause for Winter loss. The packing is held in place by an outer-case, consisting of 2 rims of about 10 inches in width, each with a good gable roof or top. These rims are about 2 inches larger, inside, than the brood chamber, leaving that amount of space for the packing.

After the close of the honey season, the bees are left as much as possible to themselves, the only care being that they have sufficient stores for the Winter, until about the first of November, Fall "tinkering" and excitement being avoided as detrimental. At this time the brood chamber cover is removed and a piece of burlap or cotton placed upon the frames and the top filled with packing to the depth of about 6 inches. Formerly this super-packing was used loose, but now sacks, or trays with cloth bottoms, are used to hold the chaff or shavings. These sacks are very handy in Spring, when upon some warm day it is desired to examine many colonies. The packing is not removed until settled warm weather and then only from the top; the sides remaining packed throughout the year. This packing at the sides, I consider an advantage, even during the sultry days of basswood bloom.

In answer to the argument of cumbersomeness, I will simply say that nearly all of the improved methods of management at all seasons of the year may be practiced with chaff hives without the moving of a single one. How this may be done could form the subject of many long articles.

Last Winter I wintered 96 colonies out-of-doors in chaff. On the first of April all were alive; one was queenless and one dwindled during April as a result of late "tinkering."—*Bee-Keeper's Review.*

The World's Columbian Exposition.

REV. W. F. CLARKE.

So it is called by the AMERICAN BEE JOURNAL and Dr. Mason—both high authorities. But I venture to think the name is not a happy one, and that if generally adopted, it will have a deterrent influence on exhibitors. When the Colonial and Indian Exhibition at which Canada made such a magnificent display of honey, was held in London, England, the exhibit was limited by the title adopted to the colonies and to India. The adjective "Columbian" seems to convey the idea that all the world is to be invited to come and see the aggregation of wonderful things the people of the United States are going to spread out before their admiring eyes.

I am not going to question the accuracy of Mr. Dadant's admirable report, but if I said what is attributed to me, I certainly spoke "without book." I had no right to say that "Ontario had already taken steps in regard to the Columbian Fair; and that the Province expected to make a very large display." What I ought to have said, was, that Ontario bee-keepers had already been discussing the matter, and that, prior to the passage of the McKinley bill, there was an expectation and disposition to take part in the exhibition. I referred to the fact that I had seen in some United States papers, the inquiry started whether the McKinley bill might not have a tendency to prevent foreign nations from participating with the same heartiness that they would have done before that piece of legislation became an accomplished fact. I did not know whether it would cool the ardor of Ontario bee-keepers or not, but I regretted the unfriendly spirit which seemed to lurk in the McKinley bill, and feared that it would have an unhappy influence on both countries, as it plainly disclosed a policy of non-intercourse.

Guelph, Ont.

[Whether Mr. Clarke thinks that the name (The World's Columbian Exposition) is "a happy one" or not, it is so named by Act of Congress, and also in the President's Proclamation, as published, last week, on page 8. It will doubtless be held, become a grand success, and pass into history under that name; and as anticipated by Mr. Clarke, President Harrison has invited all the world — Canada included—to appoint representatives and send exhibits.

No one should entertain any fears that the McKinley bill will materially interfere with the success of the Fair. Congress will see to it that all articles intended only for exhibition will be admitted free of duty.

The "unfriendly spirit" which Mr. Clarke is so much exercised over, exists only in his imagination!

As to the course the Ontario Bee-Keepers' Association will pursue about making an exhibit, we shall know more after its session this week. We imagine, however, that its members known to entertain broad and liberal views will exert their influence in the right direction.—ED.]

If you have a desire to know how to have Queens fertilized in upper stories, while the old Queen is still laying below—how you may *safely introduce* any Queen, at any time of the year when bees can fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and is as interesting as a story. Price, bound in cloth, $1.00.

CONVENTION DIRECTORY.

Time and place of meeting.

1891.
Jan. 13.—Cortland Union, at Cortland, N. Y.
M. H. Fairbanks, Sec., Homer, N. Y.
Jan. 13-15.—Nebraska State, at Lincoln, Neb.
J. N. Heater, Sec., Columbus, Neb.
Jan. 16, 17.—Indiana State, at Indianapolis, Ind.
Geo. C. Thompson, Sec., Southport, Ind.
Jan. 19, 20.—Colorado State, at Denver, Colo.
E. Milleson, Pres., Box 2522, Denver, Colo.
Jan. 20-23.—Minnesota State, at Minneapolis, Minn.
C. Theilmann, Sec., Theilmanton, Minn.
Jan. 22-24.—New York State, at Albany, N. Y.
Geo. H. Knickerbocker, Sec., Pine Plains, N. Y.
Jan. 28.—Vermont State, at Middlebury, Vt.
J. H. Larrabee, Sec., Larrabee's Point, Vt.
Feb. 10, 11.—Ohio State, at Toledo, O.
Miss Dema Bennett, Sec., Bedford, O.
Feb. 11, 12.—Eastern Iowa, at Maquoketa, Iowa.
Frank Coverdale, Sec., Welton, Iowa.
May 7.—Susquehanna County, at Montrose, Pa.
H. M. Seeley, Sec., Harford, Pa.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—The Editor.

North American Bee-Keepers' Association

President—P. H. Elwood. ..Starkville, N. Y.
Secretary—C. P. Dadant ......Hamilton, Ills.

National Bee-Keepers' Union.

President—James Heddon ..Dowagiac, Mich.
Sec'y and Manager—T. G. Newman, Chicago.

Bee and Honey Gossip.

Bees very Quiet.

The past season has been a very poor one for honey, with me ; not half so good as 1889. Many others I know, are in the same condition. My bees have been in the bee house for 6 weeks ; and the temperature ranges from 42 to 45°. I never saw bees quieter.

John Dewar.
Tiverton, Ont., Dec. 26, 1890.

Greatly Pleased.

The first number of the Bee Journal for 1891 is here. I am greatly pleased with the new form, the better arrangement of the reading matter and the beautiful clear print. Every bee-keeper in America should take a lively interest in supporting the Journal that is doing so much for the advancement of our pursuit. I hope every subscriber will make an effort to get a new one, and thus aid you in maintaining this new and expensive venture in enlarging and improving our leading bee-periodical. I I wish you the greatest success.

Dr. G. L. Tinker.
New Philadelphia, O., Jan. 1, 1891.

Better than Many Others.

My report for 1889 is not very good. I started in the Spring with 70 colonies. They increased to 77 and gave 2,200 pounds of comb honey in one-pound sections. James Carpenter.
East Maine, Broome Co., N. Y.

No Cold Weather Yet.

Up to this date the weather has been remarkably pleasant. There has been but little snow or freezing. Bees fly frequently, and on one day I thought to excite them to fly generally, by supplying plenty of watered honey ; they cleaned out all that I exposed, 10 pounds at least. There is no sleighing yet.

S. D. Haskin.
Waterville, Minn., Jan. 1, 1891.

Home Market for Honey.

My 60 colonies are in good condition, and had a flight on Dec. 22. The honey crop was not very good, but the bees gathered plenty to winter on from the Fall blossoms. It has been extremely dry here, since June. Comb honey, in our home market, sells at 20 cents per pound, and extracted honey sells at 10 cents per pound, but the demand is not abundant, P. E. Vandenburg.
Jerseyville, Ills.

Plenty of Winter Stores.

I close the season of 1890 with 51 colonies of bees and 900 pounds of comb-honey in 1-pound sections. I keep my unfinished sections for the Spring feeding. My hives this Fall were unusually heavy with bees and honey. These I placed in Winter-quarters December 4. I put a number of newspapers on top of the brood frame, then place a board on top of them and tie a piece of binding twine around the front and back part of the hive to keep the top and bottom boards in place. First, I place a row of empty hives on the bottom of the cellar, and then tier them up from 3 to 4 hives deep, and about once a week I pay them a visit, and with a long wire hook remove all dead bees found at the entrances of the hives, being very careful not to make any noise, or shake the hive as this disturbs the bees. Thus far my bees appear to be wintering well, and they are not troubled with rats and mice playing hop, skip and jump over their hives. I fully agree with Mr. Dibbern that these pests are quite unnecessary, and my way of exterminating them is not to keep a cat, but buy a box of

Rough on Rats and sprinkle a little on some bread, spreading it thinly with butter to hold the poison on the bread; also take some pumpkin seeds, split one end and put in a little of the poison and place the bread and seeds where the rats and mice come into the house and cellar, and in 3 days' time it will be hard to find even a track, for it most effectually exterminates them. I keep this bait in my cellar constantly while my bees are there for the Winter. This has been a discouraging season to many bee-keepers in this locality, but I say "hold the fort" there are better days coming. My honey sold at 16 and 18 cents per pound. As I desired to make bee-keeping a specialty, it was very disappointing to me in not securing the usual increase of swarms. G. N. BENHAM.

Red Wing, Minn., Dec. 29, 1890.

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Prevention of After-Swarms.

In the BEE JOURNAL for Dec. 27, 1890, I find an article on the prevention of after-swarming by R. Dart. I have practiced the method he recommends, and I will cheerfully say with him, "it is simple, and it never fails to accomplish its work," but it brings *me* a later aud more serious trouble. Generally, in August, at the commencement of the golden-rod harvest (for in this location we generally have a good harvest from the National Flower), these first or prime-swarms send out a large swarm. The weather at that time is generally very warm, and it is not very pleasant to have such swarms to deal with then. Any one who will tell us how to prevent these swarms, will confer a great favor on at least one of your constant readers.

Sunapee, N. H. J. P. SMITH.

◆

Italian Bees Ahead.

During the Spring of 1890 I started with 32 colonies of bees, which were in splendid condition; these increased, by natural swarming, to 44. The season was very unfavorable for gathering honey until the latter part of August, when the golden-rod commenced to yield, and as a natural result, the weight of the hives were increased from 2 to 3 pounds per day. Although we had an abundance of white clover throughout the season, it did not yield any honey in this vicinity. About the latter part of September I had to feed my bees for Winter storage, and this took more than one barrel of granulated sugar. I will also send an account of a friend's bees which are under my care. His 35 colonies, Spring count, increased to 43, by natural swarming. They were in very poor condition in the Spring, yet I think they have done much better than mine, probably because they were Italians. As a rule, I use the Simplicity hives, but I have a few colonies in box-hives. I hope that the coming season will be a more productive one than the past has been. J. A. HOLMBERG.

St. Paul, Minn., Dec. 18, 1890.

◆

Fair Honey Crop.

I prize the BEE JOURNAL very highly. Any one would be the loser to be without it, if it should cost ten times the price. It contains many practical and appropriate facts, which would add to the store of any man's knowledge. This has been a fair year for bees, although as a general thing it has been rather a poor year in this part of the Province. My honey average has been 40 pounds, Spring count. I am often surprised when I read of Western bee-keepers being obliged to feed the bees in the honey season, to keep them from starving. That is a thing I never have known during my 19 years of bee-keeping experience in this Province of Quebec, although it is so much further north than the Western States. There has been but one year in 19, but that I received some surplus, more or less, from my bees. H. S. BALL.

Granby, Quebec, Dec. 29, 1890.

◆

Only Enough Honey for Stores.

The past year has been a poor one for bees. There was not much more honey gathered than was needed to Winter the bees. I extracted about 50 or 60 pounds per colony, from 18 colonies. Six of these were the increase from 12 colonies, Spring count. As far as I am able to learn, this is considered very good in this vicinity. We are looking forward to, and hoping for a better season in 1891. JOHN L. HAWSER.

Van Horne, Iowa, Dec. 29, 1890.

◆

No Honey and no Increase.

The honey crop in this locality has been a failure during the past season. There has been no honey and no increase. The result is: Spring count, 100 colonies; Fall count, 100 colonies. Bees are in good condition for Winter. The weather is very dry. S. H. MOSS.

Colchester, Ills., Dec. 31, 1890.

Gathering Honey Now.

My bees have been gathering honey and pollen every day this month, I had 21 colonies in the Spring; I have taken from them 601 pounds of comb-honey and 2,340 pounds of extracted honey, and have about 300 pounds yet to extract. They increased to 42 colonies. I make my hives, 8 frames, and 2 story, or 16 frames in both stories. The frames are 9¼ by 16 inches, inside measure. The hives and frames are made of coal-oil cases, taken to pieces and re-made, so as to take the above-mentioned frames. They cost me from 5 to 10 cents per case. It takes about 2½ cases to make a hive and frames. They stand in the open air, in the shade of trees. They are covered in the rainy season with raisin trays. I have no fussing here about wintering. P. W. McFatridge.

Ontario, Calif., Dec, 20, 1890.

Insuring Bees.

In regard to insuring bees I will say to E. L. Plumb, who asks for information on this subject, on page 811, of last year's Bee Journal, that I insure in the Phœnix Co. of London, England. The following clause occurs in our house and barn policy: Six hundred dollars on bees, bee-hives and honey, while in the dwelling or yard of the above-described premises." I have 100 colonies insured. The rate on farm and personal property here, is 1 per cent. for 3 years. The clause concerning bees, hives and honey, was inserted in the policy at the same rate. H. P. Langdon.

East Constable, N. Y., Dec. 15, 1890.

Mice in the Apiary.

As the year is drawing to a close, I will give a short report of my apiary. I commenced with 126 colonies, Spring count, which gave 12 swarms. I returned all but 4 to the hives, and these I sold to my neighbors at $1.50 per swarm, they furnishing hives. I obtained 5,200 pounds of extracted-honey, the larger portion of which I sold at 10 cents per pound. The past season has been the poorest with me for 28 years, considering the number of bees and the condition they were in at the beginning of the Spring. The Fall crop was good, and the hives were well filled with sealed honey, and brood-rearing continued until the middle of October. I placed 88 colonies in the Winter repository, and 52 in chaff hives on the Summer stands, and they all seem to be in good condition now. During the latter part of October I noticed an increase of mice, and I think they had a better season than the bees, or else they had a reunion in my bee-yard, bee-house and cellar, and as I was anxious to get rid of them, I tried the following remedy: I went to the drug store and got 15 cents worth of strychnine, and had it pulverized, then I had the cook prepare a dough with sweetening, and everything necessary for a sweet cake, in which I mixed the powdered strychnine, and after it was baked, I distributed it in a dozen different places, making sure nothing bigger than a mouse could get to it; and I have not seen one since. I look for a better season in this locality the coming year. The white clover having had a good start this Fall, I think the bees will come out all right in the Spring.

P. Lattner.

Worthington, Iowa, Dec. 27, 1890.

Market for Honey at Home.

I think that the new shape of the Bee Journal is quite an improvement over the old. The bees here, in Northern Ohio, had quite a "fly" on New Year's day. They spotted the hives quite badly, which shows that they had unripe honey for Winter stores. Last Summer I got about 15 pounds of comb-honey per colony, at the home apiary, and 28 pounds of comb-honey at the "out-apiary." Our honey was all basswood. We got 18 cents per pound, and the grocers came to the house for the honey. This is the way to get rid of your honey. Get up a home trade. I had about 2,000 pounds of honey for my crop last year.

Elbert Greeley.

Lorain, O., Jan, 2, 1891.

Reader, the Bee Journal is working for your interest every day in the year, and now you are respectfully invited to work for its interest, by devoting a few hours to get a *new* subscriber for it, and thus help to make it still more valuable and useful to the pursuit.

A Word of commendation from our readers to those not among our subscribers, will be more potent than anything we can say. If you like our Journal—please let your neighbor know it, and let us thank you in advance for this favor.

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BEE JOURNAL

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☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

Convention Notices.

☞ The Annual Meeting of the Indiana State Bee-Keepers' Association, will be held in the Agricultural Rooms, State House, Indianapolis, Jan. 16, 17, 1891. GEO. C. THOMPSON, Sec., Southport, Ind.

☞ The Annual Meeting of the Colorado State Bee-Keepers' Association, will be held Jan. 19, 20, on the Cor. 14th and Laramie Sts., Denver. The first session will begin promptly at 10 o'clock on the morning of the 19th. All interested in bee-keeping, especially strangers, are cordially invited to be present, and assist in the exercises.
E. MILLESON, Pres., Box 2522, Denver, Colo.

☞ The 22d Annual Meeting of the New York State Bee-Keepers' Association, will be held in Agricultural Hall, Albany, N. Y., on Jan. 22-24, 1891. Reduced Railroad Rates. Pay full fare to Albany, and we will give you return certificates over any road coming into Albany (except the Boston & Albany) at one-third of the regular fare. A cordial invitation is extended to all. Come and bring your friends with you. A complete programme will be published as soon as completed.
GEO. H. KNICKERBOCKER, Sec., Pine Plains, N. Y.

☞ The Annual Meeting of the Ohio State Bee-Keepers' Association, will be held in Toledo, O., on Tuesday and Wednesday, Feb. 10 and 11, 1891. Full particulars as to railroad and hotel rates, and place of meeting, will be given later. Let all interested in bee-keeping make an extra effort to be present on this occasion.
MISS DEMA BENNETT, Sec., Bedford, O.
DR. A. B. MASON, Pres.

☞ The Convention of the Eastern Iowa Bee-Keepers, will be held in the Dobson Town Clock Building, at Maquoketa, Iowa, Feb. 11, 12.
FRANK COVERDALE, Sec., Welton, Iowa.

☞ The 8th semi-annual meeting of the Susquehanna County Bee-Keepers' Association will be held at Montrose, Pa., on Thursday, May 7, 1891.
H. M. SEELEY, Sec., Harford, Pa.

☞ The 12th Annual Convention of the Nebraska State Bee-Keepers' Association will be held in the Nebraska Hall of the State University at Lincoln, on Jan. 13-15, 1891. The State Horticultural Association will meet at the same time, and arrangements will be made to hold joint sessions. In order to get reduced railroad rates, take a receipt from your home agent, and have it read, "To attend the Horticultural Association." This will procure for you a return ticket, at one-third fare.

A good meeting is expected, and all are invited. Matters of importance will be transacted pertaining to an exhibit at the Columbian Fair, and our exhibit with the State exhibit at the same. For further information and programme, apply to
J. N. HEATER, Sec., Columbus, Neb.

☞ A joint meeting of the Minnesota Horticultural Society, and the Minnesota Bee-Keepers' Association, will be held in Minneapolis on Jan. 20-23, 1891, in Guaranty Loan Building. A business meeting of the Bee-Keepers' Association, apart from the Horticultural Society, will be held at 9 a.m. on the 21st, to adopt a Constitution and By-Laws. The afternoon and evening sessions, on that day, will also be devoted to the bee-keepers. All who are interested in bee-culture should not fail to attend. An interesting and instructive time is expected. A number of prominent bee-keepers will be there. Prof. N. W. McLain, of the Minnesota Experimental Station, an expert on bee-culture, will give an interesting lecture. C. THEILMANN, Sec., Theilmanton, Minn.

☞ The Annual Meeting of the Vermont Bee-Keepers' Association, will be held at the Addison House, Middlebury, Vt., Jan. 28, 1891.
J. H. LARRABEE, Sec., Larrabee's Point, Vt.

☞ The Cortland Union Bee-Keepers' Association will hold its Annual Meeting in the W. C. T. U. Rooms, in Cortland, N. Y., Jan. 13, 1891. All who are interested are invited.
M. H. FAIRBANKS, Sec.
J. H. KENNEDY, President.

We send both the Home Journal and Bee Journal for 1891, for $1.35.

CLUBBING LIST.

We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

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Farmer's Account Book	4 00	2 20
Western World Guide	1 50	1 30
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◆

Supply Dealers, before issuing their Catalogues for next season, should write to us for terms on the Globe Bee-Veil. We have sold over 1,200 within the past year. They give universal satisfaction

HONEY AND BEESWAX MARKET.

DETROIT, Dec. 25.—Comb Honey is selling at 15@17c. White Clover quite scarce. Extracted, 7@9c. Beeswax, 26@27c.
M. H. HUNT, Bell Branch, Mich.

NEW YORK, Dec. 24.—Market is very quiet, especially on comb honey. We quote: Fancy white 1-lbs., 15@16c; 2-lbs., 13@14c; off-grades, 1-lbs., 13@14c; 2-lbs., 12c; buckwheat, 1-lbs., 11@12c; 2-lbs., 10c. Extracted, basswood and white clover, 8½@9c; buckwheat, 6½@7c; California, 6¾@7¼c; Southern, 65@70c per gallon. Beeswax, 25@27c.
HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

KANSAS CITY, Dec. 26.—Honey is very slow sale, both comb and extracted. We quote white 1-lb. comb, 16@18c; dark, 12@13c; white, 2-lb., 14@15c; dark, 11@12c; extracted, 6@7c. Beeswax, 25c.
CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CINCINNATI, Dec. 27.—Demand is fair for extracted honey at 6@8 cents. There is a good demand for choice comb honey at 18@20 cents. in the jobbing way. Arrivals are fair of all kinds but Southern extracted, which is scarce. Beeswax is in good demand at 24@26c., for good to choice yellow. C. F. MUTH & SON,
Corner Freeman & Central Aves.

CHICAGO, Dec. 12.—New honey arriving very slowly, demand active, and all receipts are taken promptly. We quote: White clover 1-lbs., 16@18c.; 2-lbs., 14@15c.; dark 1-lbs., 11@12c; 2-lbs., 9@10c. Extracted meets with quick sale, values ranging from 6½@7½ cts., depending upon quality and style of package. Beeswax, 28@30c.
S. T. FISH & CO., 189 S. Water St.

BOSTON, Dec. 26.—We quote fancy white 1-pound combs, 19@20c; fair to good, 18@19c. No 2-lb. combs in the market. Extracted, 8@9c. No beeswax on hand.
BLAKE & RIPLEY, 57 Chatham Street.

KANSAS CITY, Dec. 18.—Fancy white 1-lb. comb, 18c; fair to good, 17c; dark 1-lb., 14@15c; 2-lb. white comb, 15@16c; 2-lb. dark, 13@14c; extracted, white, 7c; dark, 5@6c.
HAMBLIN & BEARSS, 514 Walnut St.

ALBANY, N.Y., Dec. 27, 1890.—The honey market is quiet, but stock is light and prices well sustained. We are selling white at 16@20c; mixed, 14@15c; buckwheat, 12@14c. Extracted, white, 9@10c; amber, 7@7½c; dark, 6@6½c. Beeswax, 27@30c.
H. R. WRIGHT, 326-328 Broadway.

CHICAGO, Dec. 26.—There is not the volume of trade usual at this season, yet prices are without material change since last quotations. Best lots of white honey in 1-pound sections, brings 17@18c; brown and dark, slow, at uncertain prices. Extracted, 7@8c per pound. Our stock is light, as to quantity, but is kept well up to demand by daily receipts. Beeswax, 27@28c.
R. A. BURNETT, 161 S. Water St.

DENVER, COLO., Dec. 26.—First grade 1-lb. sections, 16@18c. Supply exceeds the demand at present. Beeswax, 25@28c.
J. M. CLARK COM. CO., 1517 Blake St.

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THE AMERICAN BEE JOURNAL
CIRCULATES
ALL OVER THE WORLD
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVII. Jan. 15, 1891. No. 3.

Editorial Buzzings.

Self-Ease is pain ; thy only rest
  Is labor for a worthy end,
A toil that gains with what it yields,
  And scatters to its own increase,
And hears, while sowing outward fields,
  The harvest song of inward peace.
—WHITIER.

* * *

A Bee Tree recently cut in Hazelton township, Shiawassee Co., Mich., yielded 100 pounds of honey.

* * *

Foul-Brood Cure.—Mr. E. P. Pratt, in the *Apiculturist* for January, remarks thus :

Over 14 columns of solid printed space was consumed in the AMERICAN BEE JOURNAL telling how to cure foul-brood. One word would have given a cheaper and safer method—cremation.

That such a cure is effectual, no one will deny ; and, personally, we think that it is the best, all things considered.

* * *

It is a Great Strength, as well as a great virtue, to be able to adapt ourselves to circumstances, and easily conform to surrounding conditions.

Bees and Fruit.—W. A. Webster, of Bakersfield, Calif., writes thus to the *Pacific Rural Press*, on this subject :

It is the candid opinion of the writer that the injury to fruit, which is charged to bees, begins with decay, birds, yellow-jackets and other pilferers ; and the offices of the bee are such as are only beneficial, in the economy of nature. The province of the honey bee is to fertilize the blossom, and save the nectar from it. A bee is guided to its legitimate plunder by the sense of smell, and, I believe, never punctures the skin.

* * *

Rocky Mountain Bee-Plant.—A correspondent in Central City, Nebr., has sent a flower, and remarks thus :

It blooms about the first of August, and grows very rank. The bees work on it all day. I wish you would tell what it is, and if it bears honey. This has been a very poor year for honey here—no surplus worth noting.

It is *Cleome integrifolia*, commonly called the "Rocky Mountain Bee Plant." It is an excellect honey-producer.

* * *

Valuable Book.—This is what Mr. A. I. Root, says in *Gleaning's* about friend Alley's excellent book, which can be obtained at this office for 50 cents ; or it and the BEE JOURNAL one year for $1.25. Mr. Root says :

This is the title of a new book, written by Henry Alley, of Wenham, Mass. It contains 80 large pages, and is full of good things. In fact, we are ashamed to say we did not even know that friend Alley had got his queen-rearing down to such perfection, for this is what the new book deals with, principally.

Toward the end of the book there are a great many good things ; for instance, how to find a fertile queen ; how to warm a small bee room economically : best fuel for smokers, and several other items that smack pretty strongly of long experience.

* * *

Sanilac county, Mich., has over 200 bee-keepers within its limits, and its annual production is valued at $60.000. A County Association, to meet four times a year, has been organized.

Bee and Honey Exhibits at Fairs.

The Managers of Agricultural Societies are always interested in anything that will increase the attractions at their Fairs, and if the exhibits of bees and honey will prove a *real attraction*, the Directors are usually quite willing to offer prizes for such in their Premium Lists.

This is just the right time for bee-keepers to make known to the Managers of Fairs, in their localities, that they will make an exhibit, if they are encouraged to do so by the offer of liberal Premiums.

Every bee-keepers' Association should now appoint a committee to wait upon, or immediately correspond with, the Fair directors in its immediate vicinity, concerning such Premiums, for the directors usually meet early in each year, to attend to that matter. And if adequate Premiums are offered, they will always call out an exhibit worthy of the name.

Bees should be shown in full colonies, or at least in Observation Hives, and the exhibit should include the native and imported stock: Italians, Cyprians, Carniolans, and Syrians, when it is possible to do so. Bees in such glassed hives always prove an ATTRACTION to those attending Fairs.

Comb-Honey, too, should be shown in glassed crates, in such quantities as will compel the passing crowds to stop and admire it!

Extracted-Honey should be put up in glass jars, fancy glass tumblers, jelly cups, etc., and shown in such abundance and attractiveness that it would compel the gazing multitudes to be captivated with it.

The most alluring exhibits are those that tower up, to be seen from a distance—as it were to hail the crowds, and cause them to approach and wonder at its excellence and astonishing proportions! Adorn these exhibits with flags and bunting—with signs and inscriptions—to charm the beholders.

Beeswax, too, should be exhibited in profusion, as coping, fencing, towers or obelisks.

Apiarian furniture—tools, hives, extractors, etc.,—should be there, to enlist the attention of beginners and those who have but a few colonies, and less experience in the pursuit.

Neatness and taste should be displayed in all the arrangements, for these are the essentials to success.

Bee-keepers should be alive to their interests in these things, and they will find that they can obtain whatever they unitedly ask for—almost invariably.

It has been remarked at nearly every place where large exhibits have been made, that the apiarian department has been the most alluring and captivating of the entire Exposition.

In view of these facts, every Bee-Keepers' Association should appoint its most efficient members to attend to the matter at once, and also to secure a grand apiarian exhibit at the next Fair in its vicinity.

Each Association should also affiliate with the National Association, and secure the medals which that body provides, to be awarded as the local Society may deem most expedient.

◆

If you have a desire to know how to have Queens fertilized in upper stories, while the old Queen is still laying below—how you may *safely introduce* any Queen, at any time of the year when bees can fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and is as interesting as a story. Price, bound in cloth, $1.00.

◆

Supply Dealers desiring to sell our book, "Bees and Honey," should write for terms before issuing their Catalogues.

The Bee-Keepers of Eastern Iowa will hold a Convention in the City Hall, Maquoketa, on Feb. 11 and 12, 1891. A neat programme is issued, in which are enumerated the following interesting topics.

Bee-keeping Compared with Other Pursuits. A. T. Wheeler, Roseville.

Which is the best Race of Bees?—N. S. Staininger, Tipton.

Marketing Honey.—J. M. Jacobs, DeWitt.

Essential Qualities in Bees.—Wm. Kimble, DeWitt.

At What Price is the use of Comb-Foundation Unprofitable.—H. L. Pangborn, Maquoketa.

The Progress of Bee Culture.—Ex-Senator L. W. Stuart, Monmouth.

Section Case for Comb-Honey.—E. W. Coe, Clarence.

Production of Extracted Honey.—W. H. Kimball, Davenport.

Our Association to Affiliate with the International.—Eugene Secor, Forest City.

Which for Profit, Comb or Extracted Honey?—L. C. Fuller, Dubuque.

Bee Raising.—Frank Cloverdale, Welton.

Prevention of Swarming, While Producing Comb-Honey.—H. L. Harrington, Calamus.

Best Method of Building up Colonies.—Thos. O. Hines, Anamosa.

Shall we Combine Bee-keeping with another Pursuit?—Charles Bixler, Hoyt.

Question—Is it Best to Clip the Queen's Wings?

Increase, and Over-stocking the Bee Pasture.—G. M. Tinker.

Comb-Honey.—H. S. Bowman, Maquoketa.

Rearing and Shipping Queens.—D. D. Hammond, Malone.

Prevention of Swarming.

Will a Queenless Colony work Satisfactorily?

Shipping Crate for Comb-Honey.—Edward Petch, Maquoketa.

This meeting is of importance to all the bee-keepers of Iowa, and they should be present and help to make the Convention a grand success. Mr. Frank Cloverdale, the efficient secretary, writes thus about some of the details and arrangements:

> Let all the bee-keepers of the State of Iowa come and hold "sweet counsel," and have communion with one another on our chosen pursuit.
>
> The people of Maquoketa are proud of the fact that the Bee-Keepers' Convention is to be held in their City, and will give them a hearty welcome, and they have provided an excellent hall for us, free of charge.

◆

Mr. Alfred Neighbour, of London, England, is dead. One by one we are all passing away—who the next will be we know not. A letter just received, from Mr. Thomas Wm. Cowan, editor of the *British Bee Journal*, informs us that "Mr. Neighbour died on Friday, Dec. 19, 1890, after an illness of considerable duration."

Mr. Neighbour was an enthusiastic bee-keeper, and a gentleman of considerable ability and prominence among the apiarists of Europe. He was the author of a book on apiculture, entitled, "The Apiary; or Bees, Bee-Hives, and Bee-Culture," which has reached several editions, and both as to the matter and style of printing, is a credit to the craft. Mr. Neighbour will be "missed," by the apiarists of England, for he was one of the oldest, most practical and progressive bee-keepers of the present age. May he rest in peace.

◆

The Convention Reports, this week, crowd out the News Department and much that was prepared for this issue. As these Reports are *fresh*, we give them the preference—but we had to omit many of the essays. These will appear as soon as room is available.

◆

Another Bee-Keeper of New York, has passed away—Mr. S. C. Green, of Geneseo. He died on Nov. 18, 1890. Mrs. Green will hereafter care for the bees. They number 69 colonies, and are now wintering in the cellar. The BEE JOURNAL extends sympathy to the bereaved family.

◆

Our Catalogue will be issued in a few days, and will be sent to our old customers, and many others, as soon as possible.

Queries and Replies.

Hives for Comb-Honey.

QUERY 748.—Which is the better hive in working for comb honey—the eight or the ten frame Langstroth hive ?—Ohio.

The 8-frame hive.—M. MAHIN.

The 8-frame hive.—R. L. TAYLOR.

The 8-frame hive.—J. P. H. BROWN.

I like the 8-frame hive best.—EUGENE SECOR.

I use the 10-frame hive.—J. M. HAMBAUGH.

The 8-frame every time. — JAMES HEDDON.

I prefer the 8-frame hive.—G. M. DOOLITTLE.

I prefer the 8-frame hive altogether. —MRS. L. HARRISON.

I prefer the 8-frame hive, although I have used both.—A. J. COOK.

The 8-frame hive seems to have the preference.—P. L. VIALLON.

I don't know. I use 8-frame hives, but I am not sure of my ground.—C. C. MILLER.

I prefer the 8-frame hive; yet I have used the 10-frame hive with good results.—H. D. CUTTING.

Neither is best; but of the two mentioned I should prefer the 8-frame hive, as the 10-frame hive holds too much.— C. H. DIBBERN.

I prefer the 10-frame hive for general purposes. There are differences of opinion, however, in the matter, which probably will never be decided. There cannot be *much* difference, anyhow.—J. E. POND.

I guess it depends somewhat on the locality, climate, etc., and I know it depends a great deal upon the condition of the weather, and the condition of the bees employed when gathering the surplus honey. During the past honey season I used two 10-frame (Langstroth) brood-chambers with perforated-zinc excluders between them, for each colony that cast a prime swarm, hiving the swarm below the excluder after transferring all the brood to the brood-chamber above the excluder. At no time in my experience has my bees paid so well as they have in the past season. In my locality a 10-frame Langstroth hive is never too large.—G. W. DEMAREE.

This query brings up the question of the proper size of a hive for comb-honey. The 10-frame hive is the best, but neither hive is large euough for Spring breeding; and it is for this reason that I would choose a larger hive. But the hive should contain not less than 13 standard Langstroth frames; then practice contraction, by suitable means, at the proper time. If these means do not suit, I may be pardoned for recommending the Nonpariel bee-hive, in which the whole matter of breediug up in the Spring and proper contraction is under ready control.—G. L. TINKER.

Convention Notices.

☞ The Annual Meeting of the Indiana State Bee-Keepers' Association, will be held in the Agricultural Rooms, State House, Indianapolis, Jan. 16, 17, 1891. GEO. C. THOMPSON, Sec., Southport, Ind.

☞ The Annual Meeting of the Colorado State Bee-Keepers' Association, will be held Jan. 19, 20, on the Cor. 14th and Laramie Sts., Denver. The first session will begin promptly at 10 o'clock on the morning of the 19th. All interested in bee-keeping, especially strangers, are cordially invited to be present, and assist in the exercises.
E. MILLESON, Pres., Box 2522, Denver, Colo.

☞ The 22d Annual Meeting of the New York State Bee-Keepers' Association, will be held in Agricultural Hall, Albany, N. Y., on Jan. 22-24, 1891. Reduced Railroad Rates. Pay full fare to Albany, and we will give you return certificates over any road coming into Albany (except the Boston & Albany) at one-third of the regular fare. A cordial invitation is extended to all. Come and bring your friends with you. A complete programme will be published as soon as completed.
GEO. H. KNICKERBOCKER, Sec., Pine Plains, N. Y.

☞ The Annual Meeting of the Ohio State Bee-Keepers' Association, will be held in Toledo, O., on Tuesday and Wednesday, Feb. 10 and 11, 1891. Full particulars as to railroad and hotel rates, and place of meeting, will be given later. Let all interested in bee-keeping make an extra effort to be present on this occasion.
MISS DEMA BENNETT, Sec., Bedford, O.
DR. A. B. MASON, Pres.

☞ The Convention of the Eastern Iowa Bee-Keepers, will be held in the Dobson Town Clock Building, at Maquoketa, Iowa, Feb. 11, 12.
FRANK COVERDALE, Sec., Welton, Iowa.

☞ The 8th semi-annual meeting of the Susquehanna County Bee-Keepers' Association will be held at Montrose, Pa., on Thursday, May 7, 1891.
H. M. SEELEY, Sec., Harford, Pa.

☞ A joint meeting of the Minnesota Horticultural Society, and the Minnesota Bee-Keepers' Association, will be held in Minneapolis on Jan. 20-23, 1891, in Guaranty Loan Building. A business meeting of the Bee-Keepers' Association, apart from the Horticultural Society, will be held at 9 a.m. on the 21st, to adopt a Constitution and By-Laws. The afternoon and evening sessions, on that day, will also be devoted to the bee-keepers. All who are interested in bee-culture should not fail to attend. An interesting and instructive time is expected. A number of prominent bee-keepers will be there. Prof. N. W. McLain, of the Minnesota Experimental Station, an expert on bee-culture, will give an interesting lecture. C. THEILMANN, Sec., Theilmanton, Minn.

☞ The Annual Meeting of the Vermont Bee-Keepers' Association, will be held at the Addison House, Middlebury, Vt., Jan. 28, 1891.
J. H. LARRABEE, Sec., Larrabee's Point, Vt.

Topics of Interest.

Foul-Brood is a Germ Disease.

C. J. ROBINSON.

The report of the International Convention, held at Keokuk, published in the American Bee Journal, acquaints us of some hard things our kind cousins "over there" in Canada have to say.

One of their chief men applies to us the epithet, "modern Gentiles," who are supposed to be antitypes of the ancient heathen!

His "voluntary contribution," read at the Convention, and published on pages 762 and 763, is, at least in some particulars, of singular import. Seemingly, the author aimed to reflect on the Yankee "great guns and tribunes" specially, and include Yankees generally. However, he whitewashes his "furrin" with the mention that his fault-finding "is harmless banter (?). All right, friends, give and take!

The gist of the contribution, of any importance, is expressed in the text of the learned essayist's theme: "How to cure foul-brood among bees." This is still a problem generally, and will continue such, so long as its true character and real cause are not recognized by bee-keepers.

The Ontario Bee-Keepers' Association, have, by virtue of an executive enactment, officials who are qualified, by reason of their research and experience, to perform the duties of a "Board of Health" in charge of apiaries. Messrs. Allen Pringle and Wm. McEvoy, who constitute the board, are familiar with the phenomenon known as foul-brood, and Mr. McEvoy informs us that he had a case of foul-brood originate in one of his colonies, under his observation and test, exempted from any possibility of mistake.

The treatment of foul-brood, as set forth in the "contribution," is the starvation plan, which gets rid of the foul-brood virus, providing nothing is left undone. However, it is more practical, and more certain of success, to use "drugs" in connection with the plan of removing bees and sound brood from infected hives. The "starvation" is a blissful fancy. I cannot avoid the issue. I have the proof to ratify my position. Almost all writers have treated the subject of foul-brood as having originated within the memory of man, but its advent, as proved by itself, was co-eval with the first appearance of bees in cold climates.

The brood of bees, while in the metamorphosis state, from the hatching until developed into the imago, have in their organisms an innate principle, which by dint of circumstances, develop (as certain as that cider ferments, when under favorable circumstances) the phenomenon called foul-brood, and these conditions are liable to happen whenever brood dies from any cause, and passes into an active state of fermentative decomposition, developing putrefaction.

In all living tissues there are latent spores (the same in inanimate matter is fungoid) which remain inert until quickened by some vital force, consequent upon the failure of normal vitality in some tissue wherein the spores become nursed and invade the tissue substance. Whenever spores are quickened, they ply their role of destroying the substance of tissues, and multiply by fission in forms known as micro-organisms.

In cases, including foul-brood, where efficient antiseptics and disinfectants (germicidal and oxidizing agents) can be brought to bear on the germs (bacilli) their progress by fission is rendered abortive, and the germs (though not *killed*) die from starvation, as it were.

The disease, called consumption may, perhaps, be denominated a germ disease, but germs are not the primary cause, though it is probable bacilli is the secondary cause—the factor that consumes the living tissues.

It is certain that spores are not the primary cause of consumption, for it is self-evident that they would not remain dormant, and celebrate, at will, in a ghost dance.

In cases of lung disease, it is impossible to treat the diseased tissues with germicidal agents — except indirectly through the medium of the circulating fluid—the blood.

In the Koch "lymph" process, the virtues of a true germicidal agent that retains its virtues while coursing through the lungs, is a great boon in therpeutics.

In a former communication, I alluded to Mr. Jones, who sits on the throne of bee-dom in Canada, mentioning that in 1882, he, at a Convention, listened to the reading of my essay, claiming that foul-brood originated by the rotting of dead brood, thus developing bacilli; and Mr. Jones was the first who responded to my claim, by saying: "I do not believe that foul-brood is a germ disease."

I take it that Mr. Jones is not a scientist, and that he ventures in "where angels fear to tread." While reading his voluminous article on pages 822 to 826 inclusive, I learned that he has changed his "do not believe," to teaching that foul brood is a germ disease, and admits that it originates from rotting dead brood, thus teaching just the same doctrine I did in 1882.

There were at that time others who disputed my claim but *they* are not worthy of mention. Mr. Jones fancies that the honey becomes charged with foul brood virus, the microbes; but, if he will investigate, he may learn that microbes do not feed on or exist in honey. Indeed, honey is a good antiseptic, and is used as such. In fact, honey possesses preservative qualities—not equal to bee-sting virus, but so long as a colony of bees remains large and honey is being gathered, they are able and do, hold out pretty successfully, against the disease.

Bee-sting poison is powerfully antiseptic; hence its reputation for curing so-called rheumatism.

The idea of bees eating germs (putrid rot, in honey)! If bees swallow germs, would the scamps remain in the "abdomen" as long as Jonah did in the fish, and come out all right? If bees ever swallowed such foul stuff as rotten brood, I would not eat honey. The only way foul brood virus can be transmitted by bees, is by being carried on their feet or other parts. I venture the assertion that more apiaries have had foul brood originate in one or more of the colonies, than the apiaries that have been attacked from the contagion.

When bee-keepers practice freeing all of their colonies of dead brood that might ferment, foul brood will be a thing of the past. Very few, if any, who have not allowed brood to ferment and rot in the hive, have seen the disease.

The case related by Mr. Jones of 10 or 15 colonies caught in the flood, and the brood was drowned—the weather was warm and the combs were wet, and continued in this condition during a period that allowed the fermentative process to decompose the tissues to a state of rottenness—and a mass of animate matter-germs emanated from the brood organisms. Such is one of the changes of organic matter, which are just as certain as that starch contains the elements of sugar, which are convertible into alcohol, and thence into ether, and so on!

One of the ways to produce alcohol is to "plant corn" and produce starch first, but you cannot get any corn to plant, other than such that first grew spontaneously.

Mr. Jones is quite right in believing that "some diseases arise *de novo*, or spontaneous." There is no disease that flesh is heir to, other than such as have originated in the flesh. It is not possible to be otherwise in the order of nature. We are subject to ills from accidental causes, such as poisoning, bites by reptiles, hydrophobia, etc. It is known that rabies appear spontaneously in animals of the canine genus, and it has been reported that hydrophobia occurred spontaneously in man; certain it is that incipient symptoms are not uncommon.

Medical scientists are aware that sometimes the most contagious diseases appear in subjects who have certainly not been exposed to the contagion.

Since I first mooted the doctrine that foul brood is a germ disease, in 1882, Mr. Cheshire, of England, has taken the subject for a theme, and speaks of it extensively. He fain would have readers infer that he is the original discoverer of the germs, or the fact that foul brood is a germ disease, and he assumes to coin a name "*bacillus alvei*" for the special kind of germs which are the exciting cause of foul brood.

Mr. Cheshire does not stop to refer to any authority, many times when he is wholly indebted to others for matter that he records. He does not, as I have read his writings, attempt to deal with the problem of the origin of foul brood, but treats that point of the matter as though foul brood came from heaven.

Lo! the poor Indians are not the only mortals who dream of a far-away spirit-country. Why look far off for what is within view? Each and every bee-brood grub can be made to develop foul-brood virus spontaneously. How do I know? Because I have proved the fact by testing. Go thou and do likewise. "Prove all things."

My plan of dealing with cases of foul brood is to remove the bees from the infected hive, and put them into a prepared hive. I prepare hives for such use, by washing the interior, frames and all, with some antiseptic. Chloride of Sodium (salt) is a powerful antiseptic, and strong brine will "fix" every thing it nears, so that germs cannot do business on it. If there be enough healthy brood in the colony from which it was removed, to bother with, I amputate the affected parts and wet the brood-combs, (all of the combs in the hive,) with some efficient disenfectant or antiseptic, and the work is done! I have found more difficult troubles to contend with, in my more than 50 years' experience in bee-keeping, than in foul brood.

Richford, N. Y., Dec. 22, 1890

Northern Illinois Convention.

D. A. FULLER.

The annual Convention of the Northern Illinois Bee-Keepers' Association was called to order, in the Supervisors' Room of the Court House, at Rockford, on Dec. 16, 1890, at 10 A.M., by President Herrick.

The Minutes of the previous meeting were read and approved.

BEE ESCAPES.

Mr. Whittlesey, of Seward, was called upon, to give his experience with the Dibbern Bee-Escapes. He said that in some cases it had worked well; in others, it did not work at all, as it would take several days. He was not satisfied and did not think it a success.

Mr. Stordock, of Durand, said that it would certainly get the bees out of the supers, but it did sometimes take several days.

President Herrick said that his experience was about the same as Mr. Whittlesey's. At times it worked well, at other times it was too slow.

D. A. Fuller, of Cherry Valley, said he had made one, by using a super rim 4⅝ inches inside, putting in a tight board, down ½ an inch, boring 2 two-inch holes, and putting a wire cone in them. Placing them on in the evening, no matter how many supers were piled on top, the next morning the bees would all be out of the supers. Sometimes there would be quite a cluster of bees on the under side of the escape.

SQUARE TOP-BARS AND BURR-COMBS.

On the question being asked as to experience with square top-bars, Mr. Sweezey, of Guilford, said that he had used them two years, and he did not think there were as many burr-combs on them as on the others.

Mr. Taylor, of Harlem, said that his experience with them was that, if the bee-space was over ⅜ of an inch above, there would be just as much burr-combs. He thought that the bee-space, over the frames, had more to do with it, than the shape of the top-bars of the frames.

Mr. Whittlesey said that his experience was that the bee-space governed the burr-combs, more than the shape of the top-bars.

The President said that he used square top-bars, and he had no burr-combs in the hives containing his new swarms, but there were some on those containing his old colonies.

The Convention then adjourned until 1 P.M.

AFTERNOON SESSION.

Promptly, at 1 o'clock, the President's gavel called to order, when he gave the following:

PRESIDENT'S ADDRESS:

Brother and Sister Bee-Keepers:

Another year has passed since we last met, to talk over the successes and failures in our calling, and to give and receive benefit from each other's experiences. Now we have come together again; but under very different circumstances. Last year we had a very bountiful crop of the nicest honey; and, although the price was low, we had a handsome balance on the credit side of our "Profit and Loss" account.

This year. we have no honey of any consequence, and the balance is largely on the wrong side of the account. Yes, and some of us are even sending for honey produced by our more fortunate brothers in Southern California, to feed our bees, in order to prevent starvation before Spring.

Many bee-keepers call it a year of failure—"utter failure." My friends, shall *we* call it an utter failure? Have we *learned* nothing by the past season's experience? Are we, as progressive *bee-keepers*, not able to put that experience to good use? True, our pocket books remain empty, and the honey-house is a rather lonesome place; so much so, that we do not take our friends to visit it, as of yore. But may we not reap a *double* harvest next year, in consequence of not having reaped any this year? Do you think there will be as many to compete with us next year?

I say most emphatically, this has *not* been a year of failure. We *need* such a year, once in a while. For what purpose, do you ask? Why, if for no other purpose, to *kill off the drones!*

Do you not know that we have drones among bee-keepers, as well as among bees? Out of the hive, as well as in it? Let me describe them to you. They are much like the drones in the hives. They appear in the Spring following a good honey season. They think there is "big money in bees; and they are going into the business with a rush; they come about the same time of the year that the other kind does; and they are useful too, in their way, to wide-awake bee-keepers. They buy our surplus bees and supplies.

Like the other kind, they think the honey season will last forever. And when they get some honey, they rush into the market with it, and sell it for half-price, breaking down the market; thus making the innocent suffer for their indiscretion.

They never examine their bees, to see what condition they are in; consequently their bees usually go into Winter quarters, quite unprepared for the ordeal.

And, lastly, they resemble the other kind of drones, in that they are always *males*. Who ever heard of a lady bee-keeper, who did not take good care of her bees, and get the highest price for her honey? Such a season as the past one, together with a good sharp Winter, will relieve us of those noisy, buzzing fellows. And, as next season's bounteous harvest comes on (I believe that Prof. Cook predicts that it will be a bounteous one) we can pile on the surplus cases, and complacently carry the filled ones and pile them up in the honey house; well knowing that there will be no "drones" to break down our market.

Well, my friends, I have taken a long time to tell what, in all, probably, you knew better than I. Now, as I said before, we have met together once more to compare notes, and to learn of each other.

Let this be an enthusiastic meeting of wide-awake bee-keepers. Much depends on you. Let us be perfectly free to talk, to ask questions, or to express our opinions.

Have any new methods, or devices, been tried during the past season? If so, let us hear about them. Have you noticed any peculiarities in the behavior of your bees during the past season? If so, tell us about that. We should be learning something every year: in the bad years as well as the good ones. And, finally, my friends, let us try and make this the best, the most useful and most enjoyable meeting we have ever had.

The secretary then read the following essay from Mrs. L. Harrison, of Peoria, Ills., on

WOMEN AS HONEY PRODUCERS.

It has been customary, since the days of Adam and Eve in the Garden of Eden, to pay women less wages, than is paid to the other sex, for doing the same kind and amount of work. But they are yearly gaining, in the race for money-getting, and are determined not to be distanced, much longer. There is a silver-lining, apparent in the dark-cloud, which has so long hovered over her horizon; and, the time is not far distant, when she will be equal in the race.

The time is not very remote when women, as honey producers, were frowned upon by specialists, as she elbowed herself in among the crowd. At the late "International Bee Association" which convened in the city of Keokuk, many practical women, who have made the production of the pure-sweet a success, were present, and received a cordial welcome. We hear no more of her unsuitableness for the business of honey-production, or see her pictured in bedraggled skirts.

One of the points in favor of her cultivating bees, is, that it can be done at home. She can look after her household and her bees at the same time. Her bees can produce as fine honey as those of the stronger sex; and, when it is placed upon the market, she is not expected to take a less price, because it is woman's work. Is this true of women who make shirts and pants?

A woman came to this city, dressed in the garb of the opposite sex, and went to work in a tailor shop. She performed her work satisfactorily to her employers for several weeks, when a worthless husband appeared upon the scene. He notified the police, and she was immediately arrested, and taken before a magistrate. On being interrogated why she dressed in the garb of a man, replied "I do not get the same pay, for doing the same kind of work, unless I deceive them as to my sex." She was compelled to dress as a woman, and her former employer cut down her wages to a woman's scale.

Women of the Northern Illinois Bee-Keepers' Association, try to produce your honey in as neat, attractive packages as possible, and demand a good price for it. Do not cut down the price in order to sell it, as some poor women are obliged to do with their wages,in order to procure the necessaries of life—but if you can get a little more than the brothers, take it.

Thus endeth the first lesson.

MRS. L. HARRISON.

DRONE-LAYING QUEENS.

Mr. Baldwin, of DeKalb, asked if any one had experienced any trouble by young queens, laying drone eggs. He had been troubled some, in that way, this year.

Mr. Blackburn, of Iowa, said that he had had some trouble that way, but it was generally caused by laying workers.

The Secretary then read an Essay from T. G. Newman, of Chicago, on "Making Exh bits at Fairs."

The discussion that followed showed that, while some present had made exhibits, they did not think the premiums were large enough to pay for their trouble, and the Association voted to have a Committee appointed to wait on the Directors of the Winnebago County Fair, to ask them to adopt a premium-list that would bring out a creditable exhibit at the next Fair. The Committee consisted of: S. H. Herrick, A. J. Sweezey and E Whittlesey.

CARNIOLAN BEES.

Mr. Baldwin, of DeKalb, asked the members of the Association what kind of bees they liked best, Italians, Hybrids, Blacks, or Carniolans? He said that he had one colony of Carniolans, and he thought that they excelled all the others.

Mr. Whittlesey said that he had one Carniolan queen, but received her too late to give any report about her progeny. She had been 21 days on the road. With his experience, heretofore, he preferred pure Italians.

Mr. Stordock said that he had some Carniolans, and he was glad that he was rid of them. They would fly when others would not, and "rob" very persistently. They swarmed excessively, and remained on the combs well, but he preferred the Italians.

Mr. Taylor had bought 7 Carniolan queens. They wintered well, but he could see very little, if any, difference in their work. He thought that they became excited more easily than the Italians, and they swarmed excessively.

KEEPING BEES AND POULTRY.

Mrs. Woodworth, of Rockford, then read an Essay on "Bee-Keeping Combined with Poultry Raising."

[This was published on page 20.—Ed.]

Mr. Blackburn said that he could make more money in keeping bees than he could from keeping poultry. He said that keeping "fancy poultry" required too much falsification for him to make money out of it.

Mr. Sweezey said that poultry-keeping might be used to help out the bad years in bee-keeping, but, like everything else, it was not profitable unless well done.

The President said that he could make poultry work well with his bees, as he could feed the old hen before bee-time.

On the question being asked: "What sized hives do you use?" most of the members present answered, ten-frame Langstroth; two used nine-frames.

The Convention then adjourned until 9 o'clock Wednesday morning.

WEDNESDAY MORNING SESSION.

The meeting was called to order by the President. Owing to the severe illness of the secretary's wife, he was unable to be present and O. H. Sweezey was elected secretary *pro-tem*, who then read the following Essay from Dr. Miller:

A FEW THINGS THAT I KNOW ABOUT BEE-KEEPING.

I am requested to write an essay on the above subject. That "few" was well put in. Even with that in, I hesitate to be very positive about knowing anything for sure, because so many times I have thought I knew something, for certain, only to find out that I was mistaken. But, here goes, for the effort.

I *know* that there's a fascination about bee-keeping that makes one content to keep on at it, even when a year comes which leaves the balance on the wrong side of the "profit and loss" account.

I *know* that, in every field, there is a limit as to the number of colonies that can be profitably supported there, although no one may be able to say, positively, just what that limit is.

I *know* that I do not put my bees in the cellar as late as I formerly did. I put 27 colonies in, this Fall, on October 28, and the latest on November 8. The weather has been warm ever since. I *know* that, but I do not think they would be any better off out-doors. The cellar door is open much of the time.

I *know* that a bee convention is an enjoyable place, even if little should be learned there.

I *know* that I can find use for all the brains I have in running bees, and then they often outwit me.

I *know* I would rather keep pure Italians, than to be stung to death by cross hybrids.

I *know* I would not like to try to keep bees without taking at least two bee-periodicals.

I *know* that you do not know any perfectly satisfactory way to prevent swarming, when working for comb honey.

I *know* that is getting upon ground, "I don't know."

I *know* I'd better quit.

C. C. Miller.

The reading of the essay was followed by a discussion on the time and manner of putting bees into the cellar, and the ventilation of Winter repositories.

Mrs. Chas. Winn read an essay on "The Lights and Shadows of Bee-Keeping."

This was followed by a discussion on "feeding-back unfinished sections," "robbing," and "the size of starters used in sections," etc.

O. H. Sweezy, then read an essay on "Bee-Keeping in Connection with Small Fruit."

This was followed by a general discussion.

The Convention then adjourned until one o'clock.

The afternoon session was called to order promptly at 1 P.M. The first thing in order were the reports of the secretary and treasurer. Secretary Fuller being absent, no full report could be had. The secretary *pro-tem* reported Tuesday's receipts $2.75, and Wednesday's $1.75.

The election of officers resulted as follows: S. H. Herrick, President; L. Highbarger, Vice President; Chas. Winn, Secretary; O. J. Cummings, Treasurer.

Then the Convention adjourned to meet on the third Tuesday in May, at Russell Marsh's residence, in Guilford, Ills.

The Report of those present, showed 1,451 colonies of bees; 11,017 pounds of comb honey, and 21,223 pounds of extracted honey. Considering the poor season, this was one of the best meetings the Society ever had.

D. A. FULLER, *Secretary*.

Bee-Keepers of Ye Olden Time.

MRS. L. HARRISON.

Fifty years ago I was at my grandfather's, and some of us (children) saw honey running from a bee gum, and put a japanned bread-dish under it, to catch the drip. I can see, with my mind's eye, just how that dish looked, but I have never tasted anything half so delicious since.

My grandfather kept his bees in gums, which took their name from being cut from the hollow logs, of gum trees. All that was necessary to do, was to saw off a hollow log, about 3 feet long, and nail a board on top, to keep out snow and rain. The entrance was made by cutting notches in the bottom, which we called teeth.

In the Fall, grandfather lifted the hives, and those that he thought too light to winter, he sat over a fire which was kindled in a hole in the ground, of about the circumference of the gum; the fire was made of dry sticks which had been dipped in melted brimstone. The fumes soon smothered the bees, and they fell into the fire.

The nice white comb honey, if there was any, was used in the comb, and that containing bee-bread, grandmother put into a linen bag and hung near the open fireplace to drain—this was called strained honey. When the bag ceased to drip, it was put into a keg of water, to soak out the remaining sweetness, and then hung up again to drain.

The bag wound up its career by being boiled in a kettle to extract the beeswax, and was kept down in the water by stones. When it was boiled sufficiently, the kettle was set off and the wax allowed to cool.

The wax was used to put with tallow, in making candles, to make them harder. The sweetened water, obtained from soaking the combs, was used in making metheglin. The product from the gums was all used, but it was not very satisfactory.

My father and mother did not improve upon grandfather's method of keeping bees, but followed in his footsteps. My husband had an aunt, Aunt Betsy Jairus, contemporary with my grandfather, who kept bees successfully at North Branford, Ct. She was much ahead of my Ohio grandfather, for she used box hives and secured the surplus in a box, put up on top of the hive, and the bees came up through holes bored in the cover.

Ever since I have been a bee-keeper, my husband has regaled me with stories of how Aunt Betsy Jairus kept bees. She was called thus, to distinguish her from another Aunt Betsy Harrison, who lived in the same neighborhood. This woman had common sense; was very energetic. and made money with her 40 or 50 colonies of bees—carried a little wooden paddle to tap them, if they attempted to sting her bare arms. Peace to her ashes, and may her grave ever be green.—*Prairie Farmer*.

Bee-Escapes, Bee-Legislation, etc.

DR. C. C. MILLER.

That Carrier for hives, of Dibbern's, is good, as described on page 16. I do not know whether it is better or worse than the rope I use. Mine is merely three thicknesses of rope, twisted together so as not to cut the hands, and slipped under the cleats to carry by. One or two persons can use it, and I think one person can use Dibbern's, by having the sticks go under the front and back cleats. I think that his can be put on more quickly, if you do not care how much you stir up the bees. After they are put on, I do not see that there is any difference in them.

The new form of the AMERICAN BEE JOURNAL handles better. Its general make-up is fine.

J. M. Young, on page 16, says that he likes the 4¼x4¼ section best, because it holds "just one pound." Will he tell us how he manages to get the exact weight? Mine vary a good deal.

On page 38, Mr. Erkel says: "To successfully move bees, the bottom as well as the top of the frames should be securely fastened, so they will not slide together and kill the bees." Right enough for some roads, I have no doubt, but I never do anything to fasten a frame, either top or bottom, if the bees have had a reasonable chance to glue them together. My roads, however, are not very rough. I have used a common lumber wagon, without hay or springs. The closed-end frames ought to be nice for hauling over rough roads.

Brother Newman I am glad that you published those "German bee-laws." Now, please tell me why such laws cannot be secured in this country. Is not that a legitimate field for the National Bee-Keepers' Union to operate in? Or, if there is some better way, tell us what it is. Are not the bee-keepers of this country just as able to get good laws as the Germans?

Marengo, Ills.

[Yes, Doctor, you are right. It comes properly under the heading of "defense," to have good laws enacted to govern the pursuit. But it will take money to get it properly presented to Congress, and see that it is wisely advocated. Perhaps our friend, R. L. Taylor, can frame such, and greatly assist in presenting them to Congress. We hope to hear from him and others on this subject with further suggestions.—ED.]

Bees Indispensible to Fruit-Growers.

DANIEL WYSS.

The first number of the AMERICAN BEE JOURNAL for 1891, in its new dress, has made its welcome arrival at my desk. Readers, let us all, with one accord, extend our thanks to the editor as an appreciation of the improvements of this valuable JOURNAL.

No doubt every bee-keeper is looking forward with bright hopes for a better honey harvest than was obtained last season.

The bee-keepers of this locality met with the same fâte as those of a great many other sections, viz: A slim honey crop. Wet weather, from the beginning to the end of the season, was the principal cause. During fruit bloom the weather was also cold for bees to fly. Consequently no honey was gathered from that source, and the fruit in turn was not benefited by the bees. It, therefore, stands to reason that we had very little fruit.

To my full satisfaction, in my experience as nurseryman and fruit-grower, the bees have proven themselves of great value to *successful fruit culture*. I am somewhat extensively engaged in strawberry and raspberry culture. My observations in this line, have demonstrated that in seasons when there were many bees, and the weather favorable for them to fly, during the blooming period, the strawberry and raspberry crop was a good one; and in seasons when bees were scarce, or the weather being too cool during the blooming period, the crop would be less.

Six or seven years ago, when most of the bees, generally kept in this locality by farmers in a careless way, died; their absence made a remarkable difference in the fruit yield; especially in small fruits. Even wild raspberries and blackberries did not yield as well for several years afterwards.

Last season my early strawberries were a failure. It is true the first blossoms froze; however, fully 75 per cent. opened up after the frost, apparently unhurt; but the weather was so cool that scarcely any bees visited these flowers or blossoms. When the later varieties bloomed, the weather was warmer (although wet), the bees visited the blossoms in great numbers. The result was, a good crop.

Summing it all up, it behooves every farmer and fruit-grower, to encourage bee culture; and to assist in removing any obstacles that may be placed in its course.

We know that bees have been declared a nuisance, in certain localities, by persons who were prompted either by ignorance or malice. Instead of being considered a nuisance, they should be recognized by law, as indispensible aids in the fertilization of all flowers.

Our legislators should, without hesitation, pass an Act, prohibiting the spraying, with poisonous mixtures, of all plants, vines, and trees, while they are in bloom.

A short time ago, I was astonished to hear a nurseryman, who is also a limited fruit grower, tell some farmers, that some varieties of plums, in order to save them from destruction by the curculio, would have to be sprayed while in bloom. I, then and there, remarked that this would be destruction to the bees, and should not be tolerated. I have the same varieties of plums to which he referred. They bloom about every year. From close observation during their bloom, and immediately thereafter, I never found any of the embryo, or small plums, injured by insects, until several days after the blossoms had fallen.

The spraying of vines, fruit trees, etc., is being highly recommended by fruit growers, who have experimented in that line. The doctrine is strongly advocated by a great many Horticultural journals. Consequently, we may expect that a great many, throughout the country, will be using these poisonous mixtures, applying them indiscriminately; therefore, the necessity for a Law, that will not only protect bee culture directly, but also the fruit grower (sprayer) indirectly. I would earnestly request Bee-Keepers to try to prevail upon their Representatives and Senators to pass an Act to guard against this evil.

A common saying is, "An ounce of prevention is worth a ton of cure," therefore, let the remedy be applied now. Unless bees were kept by near neighbors. I would keep at least half-a-dozen colonies for the direct benefit to my fruit crops, even if I were getting no surplus honey from them.

Owing to the uncertainty of honey crops, caused by unfavorable seasons generally, and other obstacles that we find in the way of our pursuit, it becomes necessary to take great precaution in every step in bee culture.

The weather not being very cold, nor too warm, so far this Winter has been favorable for bees, in this locality. The white clover, from which we generally get our surplus, if we have any, is well set, and looks promising for the coming season.

It gives me pleasure, in perusing the columns of the AMERICAN BEE JOURNAL, to learn that a prominent apiarist and correspondent, who formerly was antagonistic to out-door wintering, has changed front.

At least two qualities are requisite in a good bee-hive: first, protection to the bees, both in Winter and Summer; second, being easy, or handy to manipulate; and, I might also add, that the cost thereof be reasonably low. The readers will find a description of such a hive in Vol. 25, page 60, of this JOURNAL. I make my own hives, but have none to sell. Although being a strong advocate for wintering bees on the summer-stand, in our latitude, I do not wish to be understood that much farther north I might be advocating the same doctrine.

New Philadelphia, Ohio, Jan. 5, 1891.

Michigan State Convention.

GEORGE E. HILTON.

The 25th annual meeting of the Michigan State Bee-Keepers' Association was held at the Normandie Hotel, Detroit, on Jan. 1, 1891. The meeting was called to order at 10 a.m., by the President, A. J. Cook, who read a letter of explanation and regret from Secretary Cutting, who was unable to attend. It was then moved by Dr. A. B. Mason, and seconded by James Heddon, and voted, that Assistant-Secretary Geo. E. Hilton be elected Secretary.

The President then appointed the following committees:

ON EXHIBITS—Dr. A. B. Mason, A. O. Quick, and R. D. Parker.

ON RESOLUTIONS—Byron Walker, A. W. Fisher, and B. Knight.

ON THE COLUMBIAN EXPOSITION—M. H. Hunt, A. I. Root, and R. F. Holtermann.

ON LEGISLATION—A. J. Cook, W. Z. Hutchinson, and Geo. E. Hilton.

The first thing was an essay on "The best all-purpose queens, and the best manner of rearing them," by W. Z. Hutchinson. Mr. Hutchinson not having arrived, the discussion was opened by James Heddon, who spoke of his first efforts to put hybrid queens upon the market, and the Winter losses in his locality, and then described his method of controlling fertilization by selecting combs from dead colonies. The drone-comb was culled out and given to selected colonies, after depriving the others of all drone-comb. He would not bring Cyprian or Syrian blood into his yard, until he knew more about such bees than he does now.

Mr. Moore asked, "What is the difference in the progeny of a black queen mated with a black drone, and the same mated with an Italian drone?"

Mr. Heddon preferred the bees from a black or brown queen crossed with an Italian drone.

Mr. Root asked Mr. Heddon if he practiced artificial fertilization?

Mr. Heddon—No, and I believe it to be impossible.

Mr. Root—In our locality, Italians are much superior. I have observed, however, that the majority let the queens take their own way, and consequently many of our largest honey-producers had hybrids. As to honey-production, he found that Italians and their crosses were superior. He did not know that pure black bees ever led the Italians in honey-production.

Mr. Moore—I have bees in three localities, and in my home yard I succeed in keeping them comparatively pure, but in my out-yards I could not, and the Italians always out-did the hybrids. Then, the pleasure in handling the Italians, compared with the others, was enough to pay for the trouble of keeping them pure.

Mr. Berg said he had hybrids, and he thought they were "high-breeds," for, nothstanding the smoke, they invariably aimed at his head, as soon as the hive was opened. He said he was a German, but did not like German bees; still he had a hybrid colony that had filled 128 sections, for two years in succession. Then he pinched off the queen's head, and replaced her with an Italian. He would not do that again.

Mr. Heddon said that he must sandwich in, or he would get buried. Those present, who were not bee-keepers, would wonder what any one wanted to handle such "pesky things" for. He would explain that it was for the money there was in it.

Mr. Holtermann asked—"Cannot a man, making a specialty of rearing queens, afford to pay more attention to keep his stock pure, than to gathering honey?"

James Heddon—Yes, and still the German bee is the best-natured bee of them all; but, it being their nature to take wing more readily than the others, we receive more stings from them as the result.

Dr. Mason said he wished he could believe everything everybody said. He did not believe that it was as easy to raise wheat as thistles. He was constantly striving for Italian blood in his apiary, and always had more black blood than he wanted. His experience was that he received more stings from the crawling bees than those on the wing, but so far as the production of honey was concerned, he would as soon have hybrids as Italians.

Mr. Walker—Are these decisions drawn from long experiences, or otherwise?

Mr. Heddon—I have had 21 years' experience, and if I had the object of producing comb-honey alone in view, I have black queens that I would breed from.

Dr. Mason—I have neighbors who are just as good bee-keepers as I am. They keep black bees, but my Italians produce more honey than they do, every time.

Mr. Moore—My experience is that the Italians are superior to the blacks, both in points of honey and wintering.

Mr. Walker—I have purchased many colonies of bees, and have found much difference in both races. I have produced as high as 200 pounds of comb-honey from a single colony of black bees, and in consideration of the difference in price, I should buy black bees.

Mr. Timpe preferred the "golden Italians," for they wintered better. He had never lost one colony in wintering, and had secured more honey than his neighbors, who kept hybrids.

Mr. Graden—What is the difference between the black and brown bees?

Mr. Heddon—There is but one race of black bees, but there are many strains, and the difference is in the strains. I do not believe that the difference in color makes any difference in wintering. My bees would winter with Mr. Timpe's, and Mr. Timpe's would die with mine.

On a vote—9 were in favor of Italians, and 8 were in favor of hybrids.

An essay by Mr. E. R. Root, was then read, entitled, "Are apicultural inventions in demand or excess?"

Mr. Heddon—I think that the question is an important one, and we should discuss it thoroughly. I think that Mr. Root is a practical man. I also think we have not an extractor worth the name, to a practical producer. In points of priority of invention, no one was more pained than the original inventor. A person who had brought out something that would enable one to manipulate two colonies instead of one, was a blessing to the fraternity, and the man who first gives it to public, deserves the credit, and if the inventor keeps it a secret, he is guilty of criminal neglect.

Mr. Holtermann could not see the justice in this, but was in sympathy with the theory.

Mr. Root liked Mr. Heddon's suggestion, but feared it would bring about complications.

President Cook said that this was a very important matter, but he believed

Mr. Root was wrong in his ideas of patents. He thought Mr. Root was inducing people to look with suspicion upon other people's property in the shape of patents. He thought when we taught people to look with suspicion upon patents, we were making a mistake. He said, do not let us talk against patents, but let us educate people to use good judgment, and be convinced that they have merits before investing in them.

Mr. Root asked for assistance to decide matters. He had so much to contend with. Inventors would not agree as to which was the real inventor.

Dr. Mason thought that Mr. Root had permeated *Gleanings* with the idea that it was wrong to patent anything in bee culture.

Mr. Berg asked, "Is it right to encourage men to patent inventions and then charge enormous prices to those who think they must use them ?"

AFTERNOON SESSION.

QUESTION BOX.—How much is it worth to put sections together and put starters in them ?

Mr. Taylor said that he got his sections put together for 5 cents per 100, and he could put in 1,000 starters per hour.

PRESIDENT'S ADDRESS.

Ladies and Gentlemen :

Another year has passed, and while we cannot rejoice in exceeding prosperity, we can felicitate ourselves and each other in the fact of continued good health, and that we are all spared to meet again. We rejoice that "man does not live by bread alone," and that conscious of duty well performed, we can smile in the face of ill-success, and hope in the proverbs—oft proved true—that "It is a long lane that has no turn," and "Every cloud has a silver lining."

Three successive poor seasons, and two *very poor*, are quite enough to make bee-keepers sober and thoughtful at least, and we cannot doubt that our experience will have its uses ; and possibly we shall all be stronger and win a better success in the end, because of this eclipse in our fortunes.

We are taught to simplify our methods, that we may accomplish more, even though we expend less labor and energy. We study new ways to fence against ill-fortune, and seek to discover how we may bridge over the stream of failure, even though broadened out by a partial or complete failure in the honey harvest.

Thus, some of our bee-keepers are learning to care for two or three hundred colonies instead of one ; and practicing the plan of establishing out-apiaries. In this way they hope to win complete success, even with but one-third of a harvest. Again, by these out-apiaries, it is hoped to profit by the local variations in nectar-secretion ; for it is a well recognized fact, that often while there is a complete honey dearth in one locality, there may be a fairly good harvest a few miles distant.

Thus the subject of simplifying our practice, and founding out-apiaries, has become one of exceeding importance, largely, perhaps, through the very reverses that have come upon us. I hope both subjects, "simplifying methods" and "out-apiaries," may be fully discussed at this meeting.

Another subject brought into prominence, greater than it had previously received, is that of adding some other employment to that of apiculture. That is to have "two strings to our bow," so that we may still shoot, even though one string snaps asunder ; or "put our eggs into two baskets," that we may still have our breakfast, even though one basket comes to grief.

May we not profitably discuss this question ? Shall the apiarist seek to combine some other pursuit with apiculture ? And if so, what shall it be ?

The subject of bee-pasturage is also brought to the front, by these seasons of reverses. Are there plants that secrete nectar, despite weather and climate ? If so, what are they ? Have they value, aside from nectar ? If not, will it pay to grow them ? We, at the College, are working at this problem, and though no considerable success has waited on our efforts this year, yet we shall not desist from our undertaking, until we have settled the question for or against special planting for honey.

Next season I shall continue the experiments already tried, and shall also try melilot and rape, to see not only if they are weather-proof as honey-plants, but also to see if they have other uses that will make them profitable to grow in the United States, even should they fail to attract the bees.

Some topics have attracted unusual attention during the past season : such as fixed spaces for frames, and deep top-bars to frames. Possibly, it will be well to discuss both of these topics. Shall we widen our end-bars until they touch ? and, if so, how wide shall they be ? And shall we supersede the slatted honey-board with the very deep top-bars ? These are pertinent questions, and may well be discussed.

We have tried several experiments, during the past season, which are of interest. We found that bees could winter perfectly well on sugar-syrup, fed in wooden combs, and also fed in comb, which had never been used for breeding, also on section-honey, with no show of pollen, except what might be in the honey. These experiments prove that in the quiet of Winter, bees may live and be quite as well off, on a diet of the carbo-hydrates alone. Indeed, there is good reason to believe that the queen, drones and older worker bees receive their albuminous food wholly from the nurse-bees, and it is not probable that the nurse-bees, during the profound Winter quiet, prepare and distribute this nitrogenous food.

Elaborate experiments, tried during the past season, show that drones die very quickly, if deprived of access to honey, even though the worker bees may freely visit them. That is, the drones must have much honey, and must take it themselves. Again, drones will live much longer if given honey, when the worker bees have access to them, than when they are beyond the reach of the nurse-bees. This, and other reasons, make me quite sure that drones must depend on the nurse-bees for their albuminous food. We see, then, there is a double reason for limiting the number of drones in the apiary. They are not only great consumers of both sugar and nitrogenous food, but they also take some of the energy of the nurse-bees, which may better be given to the queen, the other workers and to the inchoate bees. Thus, this point has, practically, no less than scientific interest.

We also tried experiments during the past season, to see if different kinds of food affected bees differently. We made the Good candy, of coarse as well as fine sugar, and gave this, also honey, honey and syrup, half-and-half, and pure cane syrup, to bees in confinement. The bees were all kept in a cage, in the quiet, and the outcome was not without interest. We found that bees caged with honey, or with honey and syrup, half-and-half, lived in seeming perfect health for weeks, while those fed on Good candy, made of coarse granulated sugar, or on pure cone syrup, made of granulated sugar, lived hardly more days than the others lived weeks.

We see, we must use only very fine sugar—minutely pulverized, to stock our cages, especially shipping cages. This caution is imperative, in case we are to ship for long distances. We note, too, that cane syrup is not a safe food, and that it is better to mix sugar syrup and honey, half-and-half, than to feed pure sugar syrup. Some of our experiments in feeding syrup for Winter may seem to contradict this; but we must have a very accurate knowledge of the experiments, to speak positively in the matter.

We know that honey is only modified or digested nectar. Honey, as Winter food, is all ready for absorption; while sugar syrup must be digested, as it is by the bees when gathered as nectar, in transforming it into honey, en route to the hive. We easily see then why this may not be a healthy food for bees in confinement. In activity, they, like ourselves, may be able to digest, while when quiet they cannot safely do this important work of nutrition. This hints at a suggestion which I have often made, that honey may be a safer food for man than cane sugar. The latter he must digest, the former is prapared for absorption already by the bees. This question is so important and so fraught with interest that I shall pursue the investigation farther another season.

I have associated not a little with people of various pursuits, and I have always thought that bee-keepers were rather exceptional as planners and thinkers. The very nature of the pursuit, I think, incites to thoughtfulness. But in the matter of the Rees cones, I think that trait has not been very fully manifest, This valuable discovery by Mr. J. S. Rees, of Kentucky, serves such a valuable purpose in the apiary, and is so obviously practical and helpful, that we would suppose, that immediately upon its announcement, bee-keepers would generally put it to the fullest use. But, notwithstanding the fact that it was tested by the inventor in 1877 and described fully in the bee-periodicals early in 1888; yet, even now, 3 years later, it is but little used. Worse than this, while some of us commenced at once to use the invention, we seemed to use it and not our minds. Else why should we use it simply as suggested by the inventor, to remove bees from the sections, and not at all in the equally, yea, more important work of freeing the extracting combs of bees. For 2 years I never saw a line in any of the periodicals, even hinting at such use.

When a bright bee-keeper of northern New York suggested such use to me a year ago, I felt much as, I suppose our good fathers did, who first saw the meal replace the stone, that had long done service in balancing the bag on the horses' back. I find the cones very helpful in extracting, and think they well merit a place in every apiary.

We find the horizontal escapes, are quite as effective as those first described by Mr. Reese. The only requisite for the first named, is that the opening be large, that the bees readily enter the cones or chambers that conduct below.

In a little more than two years the great Columbian Exposition is to open. The location of this colossal fair, just outside (so to speak) of our own commonwealth, gives to Michigan a superb opportunity to show her capabilities, to exhibit the magnitude of her resources, and the enterprise and intelligence of her citizens. No doubt all other industries will come to the front, and establish, in the view of the Nations, Michigan's proud position at the head, or as one of the leaders in the industrial enterprises of the world. Nor must our bee-keepers take a second place in this important work. But this enterprise will cost much energy, labor and money. It should be done, and well done. This requires Legislative action, and the coming Winter is none too soon to set the Legislative wheels in motion. Should we not, then, have a competent committee, to work with kindred committees, in rightly presenting the subject to the attention of our law makers. Happy are we in having one of our best men in the Legislature, who we may be sure will see our interests are not neglected.

Again we all desire that our interests be well cared for at Chicago. We must have a competent superintendent. The right man for the place is already suggested. Should we not use our influence towards his appointment? In case he needs an assistant, or in case Michigan sends a special person to see that our exhibition is properly arranged, should we not suggest the proper person? If so, can we do better than to urge that our energetic and capable Secretary be considered as eminently the person for such service? I suggest that this whole matter be carefully considered?

The present Assistant Secretary of Agriculture, Hon. Edwin Willets, has ever been the firm friend to the bee-keepers. His valuable services in procuring the repeal of the interdict against mailing queens, will ever be held in grateful memory by us. He is still thoughtful of our interests, and as I am assured, is determined that the Government in its watchful care should not forget the bee-keeper. He has already formulated plans for extended experimentation in the line of apicultural advancement. I feel sure that he will co-operate in any work that we as bee-keepers may suggest.

I call your attention to the matter of urging upon the attention of the Department of Agriculture the desirability of seeking out the races and species of bees in various parts of the world, and of importing them to America. It seems to me that this should be done, and by the Government. I suggest that we memoralize the Department of Agriculture to that effect.

It is a fact that spraying fruit-trees with the arsenites, to defend against the codling-moth, leaf-rollers, canker-worms, tent-caterpillars, etc., is becoming, and will continue to become more and more common. It is equally patent that such spraying, even for the object in hand, should not occur at the time of blossoming. It is also beyond question that such spraying at the time of bloom is likely to be disastrous to bees in the vicinity, and that injury to the bees is very hurtful to bee-keeper and fruit-grower alike. Every intelligent man recognizes the benefits of bees to plants, and will regard with displeasure any circumstance that tends to injury or destroy these valuable agents of fertilization.

It is not probable that any person would spray his orchard while in bloom were he aware of the danger, so it is very important that information on this point be speedily, generally and widely scattered. What would do this more quickly and effectively than a law making it a serious offense to spray fruit-trees with poisons while in bloom? I believe that Michigan, whose bee-keepers have already suffered, should act in this matter; should be the first indeed to inact a law that would be almost sure to prevent this needless and inexcusable practice. I hope that Mr. Taylor will be appointed a committee of one, to take this matter in hand, and secure such Legislation as in his good judgment will best secure the end desired.

At this meeting we first try a new scheme—the holding of our session when we are sure to procure reduced fares on the railroads. This, and the holding of our meetings where some person of the locality will be interested, and will look after the local arrangements, is, as I suggested a year ago, of great importance. We have now seen the practical workings of the scheme, and can act very intelligently as to the time and place for holding the next meeting. Such action is so important that I suggest it be taken with thoughtful care.

A. J. Cook.

Mr. Moore asked Prof. Cook if he had experimented with English heather.

Prof. Cook—It has been repeatedly tried, and always proved a failure.

Mr. Heddon did not think that legislation in favor of the bee-keepers, against the spraying of fruit trees would be advisible.

Mr. Root said there had been many inquiries as to what course they should take against poisoning their bees, and he recommended the Bee-Keepers' Union, and asked Mr. Taylor to state the law on such matters.

Mr. Taylor—It is difficult to secure evidence to prove whose bees were killed, or who had poisoned them.

Wm. Anderson thought that the Law was a good "school master," but should be used lawfully. He thought that if a person was told that it was against the laws of Michigan to spray fruit-trees, when they were in full bloom, it would be a great restraint.

On a vote being taken, 20 were in favor of making such a Law, and 7 were opposed to it.

An essay on "Foul-Brood," by R. L. Taylor was then read, and Mr. Taylor had combs in the hall containing foul-brood, and this "object lesson" was of great value to those present.

Mr. Graden asked, Will foul-broody honey infect another colony, if carried into that hive? This was answered, yes.

Mr. Graden said that he had *had* a great deal of experience with foul-brood, for several years, but he did not think that a remedy existed that would produce a permanent cure. His neighbors' bees robbed his foul-broody colonies, 5 years ago, and they have no foul-brood yet. His new swarms from foul-brood colonies are not affected the first season.

An essay entitled, "Is Profitable bee-keeping a thing of the past?" by T. F. Bingham, was then read.

Mr. Heddon said that he believed there were fortunes to be made in bee-keeping, and fortunes could also be lost. The person who could increase his crop, and decrease his labor, would succeed. He had found that the first thing wanted was a proper hive.

Mr. Anderson thought that the small bee-keepers kept the prices of honey down, by selling at ruinously low prices.

Mr. Moore thought that the good honey produced by the specialist, would supersede the poor honey produced by the old-fogy bee-keeper.

Dr. Mason wanted to know why we were getting so small a price for our honey, when it was so scarce?

Mr. Heddon said why he sold his so cheaply, was that he sold strictly for cash in advance, and it made him a good advertisement. If he got a good crop next season he would sell it for the same price as this year.

Mr. Walker said that the most of the honey put upon the Detroit market during the past season, was produced by non-specialists, and he thought that Mr. Heddon ought not to have sold his superior honey so cheaply. He sold his extracted honey to grocers for 11 and 12 cents per pound.

Mr. Root said that the demand for honey was increasing; that they were now selling their fifth car-load from the the west, and they have a standing order for two tons a month from now until April.

Mr. Moore said that the masses were not educated to the use of extracted-honey, and were not posted as to the difference between extracted and strained honey.

An essay entitled "Honey statistics, and their advantages to the bee-keeper," by G. H. Knickerbocker, was then read.

Mr. Moore thought that the New York Honey-Producers' Exchange was a good thing, as it supplimented the report given in *Gleanings*.

Mr. Holtermann considered that the report was useless unless it was received immediately after the completion of the honey crop.

President Cook considered the report in *Gleanings* superior to the New York Honey-Producers' Exchange, as it was broader in its nature. He thought that the space could be saved by printing a summary gotten up from reports, from every county in the State, as nearly as possible.

Mr. Heddon wanted the subject of honey-boards brought up.

President Cook said the break-joint honey-board prevented brace-combs and propolis. He could not get along without the honey-board, and did not think that the thick top-bar would ever supersede the honey-board.

Dr. Mason had taken solid comfort in the use of thick top-bars; the bars being as clean at the end of the season as when the bees were first put on them.

Secretary Hilton was asked his experience with honey-boards.

He said that he used a sheet of perforated zinc laid directly on the brood-frames, with one bee-space between the top-bars and sections, thereby bringing the sections within the least possible distance of the brood.

Mr. Walker had used various kinds of honey-boards, and had no trouble with brace-combs, whether break-joint or otherwise.

Mr. Root thought we had better go slow in the matter of thick top-bars, and the many new devices. It is expensive, and that was a serious matter. Regarding dovetailed hives, he said that they could be made and shipped cheaper than to cut them square.

EVENING SESSION.

"In what do we profit by the importation of queens?" by D. A. Jones, was the next essay read.

A. I. Root said that he would be very glad of suggestions. They were importing 200 queens per year, and after testing all other resources, they knew of nothing better than the best importations from Italy.

Mr. Perry thought the people went a great deal by looks. They were usually pleased at first with a yellow queen; but many times would become dissatisfied when their qualities were tested. Many of the darker ones proved more satisfactory.

Mr. W. Z. Hutchinson thought that the importation of queens at the present time was of no value, as we had and could breed as good queens as the world contained.

President Cook thought that the American breeders were not doing as much for themselves as Nature was doing for the bees in Italy; if they were we would be exporting queens.

Mr. Berg could not see how we could accomplish much in that direction, so long as men differed so much in opinions. We cannot control the crossing as we can with our stock.

Mr. Timpe was of the same opinion. He preferred the "golden Italians," while his neighbor would not have them.

QUESTION-BOX.—What are the relative merits of the dovetailed-corner, and the square or halved-corners.

John G. Kundinger had a sample of the dovetailed work on exhibition, and it was decided in favor of the dovetailed-corner.

"Is as much foundation as we are using advisable?"

Mr. Taylor—Yes; use full sheets every time. He had tried the Hutchinson plan, and had more combs built on that plan than he wanted.

W. Z. Hutchinson had no trouble in getting worker-comb without full sheets with young queens; but, with old queens, they would build drone-comb.

A rising vote showed 16 in favor of full sheets, and 4 in favor of starters.

Dr. Mason said that the practical difference with him was nothing, whether he used foundation or not.

Mr. Walker wished to qualify his vote. He used full sheets in the outside sections, and starters in the center ones.

Mr. Heddon thought that this would give drone-comb in the centre sections.

"Shall we use closed end-bars?"

Mr. Hunt—I would not.

Mr. Taylor would, because they stay there.

Dr. Mason—Yes; that is just what they do, and if you want to get them out, they all have to come out, and sometimes I have to get on top of them to get them out.

MORNING SESSION—JAN. 2.

"The benfits to be derived from apicultural associations," by R. F. Holtermann, was the first essay read.

Mr. Root said if we were not careful we would find ourselves like the rickety old man described in "Pilgrim's Progress;" and he hoped, if any one saw him hanging back in the matter of Conventions, he wanted them to take him by the collar and straighten him up.

Dr. Mason said that it was a good essay, but all might not agree with the writer. He could not, in the matter of judges. He had judged at Fairs, and other places, many times, and could do better justice to all parties alone, than with two or three others.

Mr. Berg said he had hesitated about spending the time and money to come so far, but he was amply paid, and should go home rejoicing.

Dr. Walter agreed with Mr. Berg, and was well paid for his efforts.

Prof. Cook rejoiced in the fact that so many, who formerly were opposed to Conventions, now endorsed them, and he was happy in the thought that some whom he had labored with, were now experiencing a change of heart; yes, they were converted.

QUESTION-BOX. — Honey adulteration. Mr. Heddon suggested a "trade mark" for our honey, and it was referred to the committee on resolutions.

It was moved and supported that the matter of prosecution for the adulteration of honey be referred to the Bee-Keepers' Union. Carried.

The next essay read, was entitled, "Cellar *vs*, out-door wintering," by Dr. A. B. Mason.

Mr. Heddon said that that paper was just what he would have written three or four years ago, but he had learned that while he could control the temperature in the cellar, he could not control the long confinement. The fact that bees out-doors could have frequent flights. and get the benefit of the sun's rays, was a great advantage in out-door wintering. He believed, however, that the wintering problem hinged upon the pollen theory.

Dr. Mason was fully in accord with all that Mr. Heddon had said.

Mr. Moore thought that there were many points in favor of out-door wintering. He had changed to out-door wintering, in chaff hives.

Mr. Walker thought that it depended more on the stores used, than the manner of wintering. He had prepared a cave with a stream of spring water running through it. He dammed up the water, to the depth of 2 inches. over the bottom, and occasionally drew it off, and the dead bees all floated out at such times. The temperature of the water is 48°.

Mr. Berg said that in the past season, his bees wintered out-doors, had given 75 pounds per colony, while those in the cellar had given but very little on account of being too weak at the commencement of the honey-flow. Those wintered out-doors seemed always strong.

Dr. Mason asked "What are the symptoms of the nameless Bee disease ?"

Prof. Cook answered: The bees appear similar to old robber bees, and come out of the old hive in a trembling condition. They will get on their backs, and cannot turn over, and finally die. The evidence was ample, that the changing of the Queen, cured the malady.

NEXT PLACE OF MEETING.

Invitations were received from Plymouth, Detroit, Grand Rapids, Flint, Battle Creek, Kalamazoo and Lansing. After a lively competition, it was decided, unanimously, to go to Grand Rapids, and the time was set for Dec. 31, 1891, and Jan. 1, 1892.

The following officers were then elected for the ensuing year: President. Hon. R. L. Taylor; 1st Vice President, M. H. Hunt; 2nd Vice President' W. Z. Hutchinson; Secretary, Geo. E. Hilton; Treasurer, Dr. A. B. Mason.

REPORTS OF COMMITTEES.

Moved and carried, that H. D. Cutting, Clinton. Mich., be appointed to arrange for the bee-keepers' exhibit at the Columbian exhibition.

Moved and carried, that the committee on legislation be permanent, and the matter of spraying, and the Columbian Exhibition, be referred to them, with full power to act.

The report of the secretary showed the following membership:

James Heddon, Dowagiac, Mich.
Daniel Stuart, Comber, Ont.
Wm. Anderson, Imlay City, Mich.
Prof. A. J. Cook, Lansing, Mich.
H. D. Cutting, Clinton, Mich.
M. H. Hunt, Bell Branch, Mich.
A. I. Root, Medina, Ohio.
Geo. E. Hilton, Fremont, Mich.
L. S. Walter, Fife Lake, Mich.
J. T. Timpe, Grand Ledge, Mich.
B. Knight. Utica, Mich.
Byron Walker, Capac, Mich.
A. O. Quick, Leona, Mich.
R. D. Parker, Climax, Mich.
A. W. Fisher, Ganges, Mich.
Dr. A. B. Mason, Auburndale, Ohio.
F. H. Miller, Brighton, Mich.
J. B. Berg, Traverse City, Mich.
R. Graden. Taylor Center, Mich.
R. F. Holtermann, Romney, Ont.
John Saver, Brighton, Mich.
F. M. Moore, Rockaway, Ohio.
J. G. Kundinger, Kilmanagh, Mich.
H. L. Hutchinson, Mayville, Mich.
G. H. Denmuth, Peru, Ind.
B. F. Conley, Brighton, Mich.
Edwin Hodge, Plymouth, Mich.
G. E. Copeland, Windsor, Ont.
W. Z. Hutchinson, Flint, Mich.
Chas. E. Cook. Starville, Mich.
E. Wright, Windsor, Ont.
Mrs. James Heddon, Dowagiac, Mich.
Mrs. R. B. Wheeler, Detroit, Mich.

The next essay was entitled "Apicultural Journalism; its past and future," by Thos. G. Newman.

Prof. Cook was glad to notice the harmony and good qualities of all the bee-papers, and said we should heartily support all the bee periodicals and increase their circulation.

Mr. Root said that the publishers of the bee periodicals would be glad of any suggestions or hints that would enable them to serve their subscribers better.

Mr. Hutchinson endorsed all that Mr. Root had said.

The next essay was entitled "Benefits to be derived from honey exhibits," by R. McKnight, Owen Sound, Ont.

Dr. Mason thought that Mr. McKnight was mistaken in regard to the amount received for single exhibits.

M. H. Hunt had received $192.00.
W. Z. Hutchinson, $175.00.
And Dr. Mason. $149.00.

The Report of the committee on resolutions was adopted as amended.and is as follows:

RESOLVED, That the thanks of this Association are due, and are hereby tendered to its officers, for the efficient manner in which they have conducted this convention.

To M. H. Hunt, and George E. Hilton, for their ardent and unselfish efforts in insuring the success of this meeting;

To the proprietor of the Hotel Normandie, for many courtesies, and especially for kindly providing, free of charge, such a commodious room for holding this convention.

We also extend thanks to those brother bee-keepers coming from a distance, from Ohio and Canada, who by their presence and untiring zeal, have contributed so largely to our enjoyment and profit.

We also acknowledge the liberal treatment of the daily papers, in reporting the proceedings of this convention.

RESOLVED, That we view with alarm, not unmixed with disgust, the fact that at this time of comparative scarcity of pure honey, increasing amounts of adulterated liquid honey are being offered for sale, in many cities of our State, by certain unscrupulous corporations, who make a business of adulterating food products; and we denounce this business as a gross fraud, not only upon the honey-producers, but also upon the consumers and venders of pure honey. We would therefore caution the public against purchasing glass packages of so-called "White Clover," or "Michigan Strained-Honey," etc., etc., which may usually be distinguished from the pure article, in that they NEVER CANDY (owing to the presence of glucose) even when exposed to the coldest weather for a long time. These goods are put on the market, in violation of a special Statute of our Legislature:—having no label to vouch for the character of the contents, of these packages, or the responsibility and identity of the parties putting them up for sale. We would further urge the consumers to purchase, only such glass packages as are properly labeled—(with the name and address of the producer), as pure honey.

Your committee would also respectfully refer the matter of dealing with the adulterators of our product, as provided by law, to the careful consideration of "The Bee-Keepers' National Union," with whose aid, and the co-operation of the public, and the press, we may confidently expect to speedily banish this infamous traffic from our midst.

We would also recommend, in order to further promote this object; that this Association adopt a trade-mark to be used by its members in marketing their extracted honey; and that the daily papers be requested by our secretary, to publish the law in relation to the sale of adulterated honey.

BYRON WALKER,
Chairman of Committee on Resolutions.

The 25 who reported, give the following statistics: 1,507 colonies of bees in the Spring, and 1,629 in the Fall. 7,024 pounds of comb honey; 11,145 pounds of extracted honey, and 645 pounds of beeswax.

The Committee on exhibits reported as follows, and the report was, on motion, adopted:

We find on exhibition, several samples of foul-broody comb, by R. L. Taylor.

Extracted honey, by Geo. E. Hilton.

Several kinds of extracted honey; some white, fall and raspberry comb-honey; and honey cartons, J. P. Berg.

Samples of comb-honey in glassed sections, J. A. Foster. Samples of different kinds of extracted honey and of Italian bees, Jacob Timpe.

Dove-tailed hive corner and frames, J. G. Kundinger. One-piece sections, L. frames, some brood, sections, foundation and samples of extracted honey, M. H. Hunt. One-piece sections, and samples of adulterated honey, Byron Walker.

Two photos of his honey display at Toronto, R. McKnight.

Samples of the "Illustrated Home Journal," and "American Bee Journal," by T. G. Newman & Son.

Sample copies of "The Review," and copies of the book on "The Production of Comb Honey," by W. Z. Hutchinson.

A. B. MASON,
A. O. QUICK,
R. D. PARKER.
} *Committee.*

Moved and carried that the matter of a "trade mark" be referred to the Bee-Keepers' Union, for consideration.

The Convention then adjourned.

CONVENTION DIRECTORY.

Time and place of meeting.

1891.

Jan. 16, 17.—Indiana State, at Indianapolis, Ind.
Geo. C. Thompson, Sec., Southport, Ind.

Jan. 19, 20.—Colorado State, at Denver, Colo.
E. Milleson, Pres., Box 2522, Denver. Colo.

Jan. 20-23.—Minnesota State, at Minneapolis, Minn.
C. Theilmann, Sec., Theilmanton, Minn.

Jan. 22, 23, 24.—Eastern New York, at Albany, N. Y.
W. S. Ward, Sec., Fuller's Station, N. Y.

Jan. 22-24.—New York State, at Albany, N. Y.
Geo. H. Knickerbocker, Sec., Pine Plains, N. Y.

Jan. 28.—Vermont State, at Middlebury, Vt.
J. H. Larrabee, Sec., Larrabee's Point, Vt.

Feb. 10, 11.—Ohio State, at Toledo, O.
Miss Dema Bennett, Sec., Bedford, O.

Feb. 11, 12.—Eastern Iowa, at Maquoketa, Iowa.
Frank Coverdale, Sec., Welton, Iowa.

May 7.—Susquehanna County, at Montrose, Pa.
H. M. Seeley, Sec., Harford, Pa.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

North American Bee-Keepers' Association

PRESIDENT—P. H. Elwood....Starkville, N. Y.
SECRETARY—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

PRESIDENT—James Heddon ..Dowagiac, Mich.
SEC'Y AND MANAGER—T. G. Newman, Chicago.

Bee and Honey Gossip.

Frames for a Migratory Apiary.

A frame like the modified Hoffman (for brood chambers) would be less bother, through the season, than it would be to fasten all the frames twice a year for hauling. About 1⅜ spacing is right for the brood chamber, and 1⅝ to 1¾ is right for the extracting super, with a queen excluded between the super and brood chamber. My crop this year is 27,000 pounds, all white and thick, and put up in new 5-gallon cans, 2 in a case.

J. F. MCINTYRE.

Ventura, Cal.

Tons of Honey for Hotels.

Dr. Searles of Worcester, Mass., is the possessor of 500 colonies of bees. At the Convention in Ploughman Hall, Boston, Dec. 13, he said that he used a modification of Dr. Tinker's hive, and that 4 tons of honey were produced last season. At one hotel he sold half a ton. Most of the honey was sold in New York at 20 cents per pound.—E. L. PRATT, in *Apiculturist.*

Adaptation for the Business.

Many persons are naturally unfit for the bee business, from carelessness and inaccuracy about their work. I know of no out-door pursuit where so much depends on the right thing being done at the right time, and in the right way. A willingness to work hard, and a determination to succeed, are characteristics of the prosperous bee-keeper. — G. M. DOOLITTLE.

Clipping Queen's Wings.

I notice in the answers to Query No. 746, only Mr. Eugene Secor cuts the queen's wings, without catching her. I have been cutting mine that way for 5 years or more, as the bees killed them quite often after I had caught them to cut their wings, in fact I lost ½ a dozen or more in one season in that way. Since then I cut them exactly as Mr. S. does. I wish to make one more remark in regard to the answer which says: "Clip the tip of Both Wings." If you clip both wings straight across, and cut off no more than ¼ of the wing, the queen will fly quite readily at swarming time, and may light high up in some tree. This is probably known to all old bee-keepers who cut their queen's wings, hence, I write this that beginners may not be misled. PAUL SCHEURING.

West DePere, Wis., Jan. 2, 1891.

Watering-Place for Bees.

I am highly pleased with the improved style and make-up of the BEE JOURNAL. Being more compact, it occupies less room on the desk, and I think it a more convenient form for binding. In the number before me, I notice an article from *Gleanings*, by E. Smith, on a "Watering Place for Bees." Let me describe the one I use: Take an empty salt-barrel, and place it upon a tight platform or bottom-board, that is considerably larger than the head of the barrel. Set it in some out-of-the-way place, handy to water, and where it will be in the shade at all times. Fill it about two-thirds full of sawdust; throw in a handful of common salt, and fill it up with water. It will ooze out and run out on the platform, and keep it just wet enough to attract the bees, who will visit it by thousands. Add a pailful or so of water every morning in hot, dry weather, and occasionally a little salt, and some refuse sweets will still make it more attractive. Bees require a large amount of water in dry weather, and the above method is the best that I have yet found for supplying them. D. MILLARD.

Mendon, Mich., Jan. 5, 1891.

Warm Weather and Winter Rainbow.

We are having remarkable weather here in west central Illinois. We have had to-day, sunshine, rain and hail, and now, 8 o'clock P. M., it is snowing. The weather has been exceptionally warm, and dry, there having been no rain or snow for several weeks. The lowest temperature, so far, was 14° above zero. The bees have flown every day this week except Sunday. The temperature was as high as 53° at 10 A. M., to-day. While rainbows are very frequent during the Spring and Summer months, their appearance upon New Year's day is of very rare occurrence in this latitude. Many of our citizens saw a beautiful rainbow to-day at about 11 A. M. This too, is of rare occurrence, happening so near the middle of the day. The rainbow was nearly due north. These are phenomena that seldom occur here, perhaps not more than once in a lifetime. S. A. SHUCK.

Liverpool, Ills., Jan. 1, 1891.

Catalogues and Price-Lists for 1891, are received as follows:

Geo. H. Stahl, Quincy, Ills. — 100 pages with beautiful illuminated cover—Improved Excelsior Incubator for hatching chickens.

Emerson T. Abbot, St. Joseph, Mo.—10 pages—Apiarian Supplies.

G. P. Morton, Prairie Home, Mo.—16 pages—Bee Hives and Apiarian Supplies.

George E. Hilton, Fremont, Mich.—8 pages—Apiarian Supplies, Bee Hives, etc.

M. S. Roop, Council Bluffs, Iowa—16 pages—Bee Hives and Supplies for Bee-Keepers.

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OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

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☞ On larger Advertisements discounts will be stated, on application.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

☞ Subscribers who do not receive their papers promptly, should notify us at once.

☞ Send us *one new* subscription, with $1.00, and we will present you with a nice Pocket Dictionary.

☞ The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to pay for another year.

☞ Systematic work in the Apiary will pay. Use the Apiary Register. Its cost is trifling. Prices:

For	50 colonies (120 pages)	$1 00
"	100 colonies (220 pages)	1 25
"	200 colonies (420 pages)	1 50

☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

Our Sewing Machine.—One who has purchased a Sewing Machine of us, as advertised on page 382, volunteers this statement:

> I am well pleased with the Sewing Machine you sent me; any persons wanting a good Sewing Machine, one that is equal to the high-priced machines which are sold by agents, can do no better than to send for your $15.00 Machine. They will be agreeably surprised when they see it. Mine is really better than I expected.
> W. J. PATTERSON.
> Sullivan, Ills., Dec. 5, 1890.

☞ A characteristic advertisement in its straight-forward business talk is that of J. J. H. Gregory, the veteran seedsman of Marblehead, Mass. Mr. Gregory's reputation for fair dealing and exact fullfilment of promises is a hardy annual, and has never failed to justify the entire confidence of his customers. All who want reliable seeds should be sure to send for his 1891 catalogue.

There are calendars and calendars. Some are purely ornamental; others useful. Among the latter is that issued for the year 1891, by the Pope Manufacturing Company, of Boston, Mass. It has removable leaves on a neat stand for each day, and plenty of space for memoranda is provided, and we find the calendar very handy on the desk. It is the fifth year of its issue.

Catarrh, Catarrhal Deafness, Hay-Fever—A new home treatment whereby the worst cases of these hitherto incurable diseases are permanently cured by a few simple applications made once in two weeks by the patient at home. A circular describing the new treatment is sent to any applicant free on receipt of stamp to pay postage by A. H. Dixon & Son, sole proprietors, 345 West King Street, Toronto, Canada. 49A 12Mtf

The "Farm-Poultry" is a 20-page monthly, published in Boston, at 50 cents per year. It is issued with a colored cover and is finely illustrated throughout.

We have arranged to club the AMERICAN BEE JOURNAL with the *Farm-Poultry* at $1.35 per year for the two. Or with the ILLUSTRATED HOME JOURNAL at $1.75.

CLUBBING LIST.

We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

	Price of both.	*Club.*
The American Bee Journal......	$1 00....	
and Gleanings in Bee-Culture....	2 00....	1 75
Bee-Keepers' Guide.....	1 50. ..	1 40
Bee-Keepers' Review........	2 00.. .	1 75
The Apiculturist.............	1 75....	1 65
Bee-Keepers' Advance	1 50....	1 40
Canadian Bee Journal.......	2 00 ...	1 80
American Bee-Keeper.... ..	1 50....	1 40
The 8 above-named papers	5 75....	5 00
and Langstroth Revised (Dadant)	3 00....	2 75
Cook's Manual (1887 edition)	2 25.. .	2 00
Quinby's New Bee-Keeping.	2 50....	2 25
Doolittle on Queen-Rearing.	2 00....	1 75
Bees and Honey (Newman)..	2 00....	1 75
Binder for Am. Bee Journal.	1 60....	1 50
Dzierzon's Bee-Book (cloth).	3 00....	2 00
Root's A B C of Bee-Culture	2 25....	2 10
Farmer's Account Book.....	4 00....	2 20
Western World Guide	1 50....	1 30
Heddon's book, "Success,"..	1 50....	1 40
A Year Among the Bees	1 50....	1 35
Convention Hand-Book......	1 50. ..	1 30
Weekly Inter-Ocean...	2 00....	1 75
Toronto Globe (weekly).	2 00....	1 70
History of National Society.	1 50....	1 25
American Poultry Journal..	2 25....	1 50
The Lever (Temperance)	2 00....	1 75
Orange Judd Farmer........	2 00 ...	1 65
Farm, Field and Stockman..	2 00....	1 65
Prairie Farmer...............	2 00...	1 65
Illustrated Home Journal ..	1 50....	1 35
American Garden	2 50....	2 00
Rural New Yorker	2 50....	2 00

Do not send to us for sample copies of any other papers. Send for such to the publishers of the papers you want.

We send both the Home Journal and Bee Journal for 1891, for $1.35.

Binders made especially for the BEE JOURNAL for 1891 are now ready for delivery, at 50 cents each, including postage. Be sure to use a Binder to keep your numbers of 1890 for reference. Binders for 1890 only cost 60 cents, and it will pay you to use them, if you do not get the volumes otherwise bound.

Supply Dealers, before issuing their Catalogues for next season, should write to us for terms on the Globe Bee-Veil. We have sold over 1,200 within the past year. They give universal satisfaction

☞ The Eastern New York Bee-Keepers' Association, will meet in convention with the State Association, Jan. 22, 23 and 24, 1891, in Agricultural Hall, Albany, N. Y., at 10 a.m.
W. S. WARD, Sec., Fuller's Station, N. Y.

HONEY AND BEESWAX MARKET.

DETROIT, Dec. 25.—Comb Honey is selling at 15@17c. White Clover quite scarce. Extracted, 7@9c. Beeswax, 26@27c.
M. H. HUNT, Bell Branch, Mich.

NEW YORK, Dec. 24.—Market is very quiet, especially on comb honey. We quote: Fancy white 1-lbs., 15@16c; 2-lbs., 13@14c; off-grades, 1-lbs., 13@14c; 2-lbs., 12c; buckwheat, 1-lbs., 11@12c; 2-lbs., 10c. Extracted, basswood and white clover, 8½@9c; buckwheat, 6½@7c; California, 6¾@7¼c; Southern, 65@70c per gallon. Beeswax, 25@27c.
HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

KANSAS CITY, Dec. 26.—Honey is very slow sale, both comb and extracted. We quote white 1-lb. comb, 16@18c; dark, 12@13c; white, 2-lb., 14@15c; dark, 11@12c; extracted, 6@7c. Beeswax, 25c.
CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CINCINNATI, Jan. 8.—Demand is good for all kinds of extracted honey, with a full supply on the market of all but Southern, which is scarce. It brings 6@8c per pound. Demand is fair for choice comb honey, which which we hold at 16@20c, in the jobbing way.

Beeswax is in good demand at 24@26c., for good to choice yellow. C. F. MUTH & SON,
Corner Freeman & Central Aves.

CHICAGO, Jan. 7.—Demand at present not very active on comb honey. Fancy white, 18c; white, 17c; white 2-lb. sections, 15c; buckwheat, 1-lb. sections, 13c; extracted, 7@9c. Beeswax, 28c.
S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, Dec. 18.—Fancy white 1-lb. comb, 18c; fair to good, 17c; dark 1-lb., 14@15c; 2-lb. white comb, 15@16c; 2-lb. dark, 13@14c; extracted, white, 7c; dark, 5@6c.
HAMBLIN & BEARSS, 514 Walnut St.

CHICAGO, Dec. 26.—There is not the volume of trade usual at this season, yet prices are without material change since last quotations. Best lots of white honey in 1-pound sections, brings 17@18c; brown and dark, slow, at uncertain prices. Extracted, 7@8c per pound. Our stock is light, as to quantity, but is kept well up to demand by daily receipts. Beeswax, 27@28c.
R. A. BURNETT, 161 S. Water St.

DENVER, COLO., Dec. 26.—First grade 1-lb. sections, 16@18c. Supply exceeds the demand at present. Beeswax, 25@28c.
J. M. CLARK COM. CO., 1517 Blake St.

BOSTON, Jan. 9.—While honey is selling slowly, prices are being well maintained, and the supply will be entirely exhausted before the first day of March. Best 1-lb. comb-honey is selling at 19@20c; fair to good, 18@19c. There are no 2-lb. sections on hand. Extracted, 7½@9c. There is no beeswax on hand.
BLAKE & RIPLEY, 57 Chatham Street.

ALBANY, N. Y., Jan. 2, 1890.—The honey market is quiet and steady, with light stocks of any kind or grade. We are selling white at 16@18c; mixed, 14@15c; dark, 12@14c. Extracted, white, 9@10c; mixed, 7@8c; dark, 6@7c.
H. R. WRIGHT, 326-328 Broadway.

A Nice Pocket Dictionary will be given as a premium for only **one new** subscriber to this JOURNAL, with $1.00. It is a splendid little Dictionary—just right for the pocket. Price, **25 cents.**

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CIRCULAR FREE.

ADDRESS,

JAMES HEDDON,

DOWAGIAC, MICH.

3A4t
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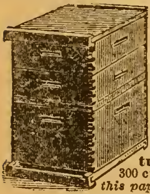
Now, See Here!

FRIENDS—I have 3 varieties of NEW POTATOES originated by me, and were highly recommended by the Michigan Agricultural College in 1889, and to each person ordering their QUEENS now, either the Five-banded Golden or Imported Italian, and sending cash with order, I will give 5 eyes, my choice of variety for an order for a warranted Queen at $1.00, or 3 eyes of each variety for an order of a TESTED Queen at $1.75, and to those who send cash or money order, I will add one or more packets of Seeds free. Queens to be sent in June and July, Potato Eyes and Seeds in April. and to the persons growing the largest potato, I will give one 3-frame Nucleus on each variety with a $5.00 Queen; and to the persons suggesting the most acceptable names, I will give a 3-frame Nucleus with a $5.00 Queen. On each variety, proposed names to be here by Aug. 15, and Premium Bees will be sent in time for the Fairs. Either strain, only a limited number will be given FREE, and first come, first served. Send stamp for Catalogue, ready Feb. 15.

JACOB T. TIMPE, GRAND LEDGE, MICH.
3A1t



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The Dovetailed **Strongest, Best** and **Cheapest BEE-HIVE** for all purposes. Pleases everybody. Send your address to the **Largest Bee-Hive Factory in the World** for sample copy of **Gleanings in Bee Culture** (a $1 illustrated semi-monthly), and a 44 p. illustrated catalogue of **Bee-Keepers' Supplies.** Our **A B C of Bee Culture** is a cyclopedia of 400 pp., 6x10, and 300 cuts. Price in cloth, $1.25. ☞ *Mention this paper.* **A. I. ROOT, Medina, O.**

Two Weeks From receipt of order (cash with the order) Cary, Langstroth or Standard Langstroth Frame Hives, Automatic Foundation-holding frames, in the flat, $1.00; nailed and painted, $1.50. Best work and material. Any hive to order at low prices. Write me. E. A. BALDWIN, West Upton, Mass.
47Dtf
Mention the American Bee Journal.

BEE-KEEPERS' SUPPLIES!

WE are prepared to furnish to Bee-Keepers all kinds of Supplies promptly, and at lowest rates. Correspondence solicited and estimates gladly furnished. Our goods are all made of the best material and are FIRST-CLASS in every respect. Catalogues and Price-Lists free. Reference—First Nat'l Bank, this place.

Address, **WM. McCUNE & CO.,**
43D1y STERLING, ILL.

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Send 50 Cents for my Book, entitled—"A Year among the Bees;"—114 pages, cloth bound. Address,

DR. C. C. MILLER,
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Mention the American Bee Journal.

British Bee Journal

AND BEE-KEEPERS' ADVISER.

IS PUBLISHED every week, at **6s. 6d.** per annum. It contains the very best practical information for the apiarist. It is edited by Thomas Wm. Cowan, F.G.S., F.R.M.S., etc., and published by John Huckie, King's Langley, Herts, England.

MUTH'S **HONEY EXTRACTOR**
PERFECTION
Cold-Blast Smokers,
Square Glass Honey Jars, &c.

For Circulars, apply to CHAS. F. MUTH & SON, Cor. Freeman & Central Aves., Cincinnati, O. Send **10c** for Practical Hints to Bee-Keepers.
Mention the American Bee Journal.

FIVE-BANDED GOLDEN ITALIANS!

THE Judge who awarded our bees 1st Premium at the Illinois State Fair in 1890, said: "They were the quietest bees on exhibition; the drones were almost pure yellow." They are superior to the common Italians in every way. Warranted Queens, $1.25; Tested, $2.00; Selected Tested, $3.00, before June 1st; lower after. Discount for large orders. Order now, pay when Queens arrive. 1891 Price-list ready. Good reference given.
S. F. & I. TREGO, Swedona, Mercer Co., Ills.
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Mention the American Bee Journal.

THE AMERICAN BEE JOURNAL
CIRCULATES
ALL OVER THE WORLD
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVII. Jan. 22, 1891. No. 4.

☞ The Rev. Stephen Roese has had another light attack of La Grippe. He is a correspondent of four bee-periodicals in Germany, as well as several in America. He has our wa pathy in his affliction.

◆

After Adding 6 more pages of reading matter to this number of the Bee Journal, still there are many interesting articles crowded out, which were intended for this week's issue. Is it worth *two cents* to the reader? That is all it costs, at $1.00 a year!

◆

This is What our friend, James Heddon, the President of the Union, wrote, when sending in his dues and vote for officers for the coming year: "Allow me to thank you for the energy and good work devoted to the Union during the past year."

◆

☞ C. H. Dibbern, when sending his dues to the Union, writes: "There is nothing I pay more cheerfully than my dues to the National Bee-Keepers' Union." This is the sentiment generally expressed by all its members.

Stock of Honey on the Market.—Chicago is at present well supplied with honey, but it is not white clover. The extracted-honey is nearly all from California, as well as the comb. Desiring to know how the stocks were in New York and Boston, we wrote to the honey-dealers there, and as their replies will interest our readers, we give them here:

The quantity of comb-honey on our market is very light, probably the lightest for years. We do not think that there are 300 crates in the entire market. The demand is not very strong, but it is moving off fairly, in a jobbing way.

BLAKE & RIPLEY.
BOSTON, Jan. 5, 1891.

The stock of comb-honey in our market consists of from 500 to 600 crates, principally in one-pound sections, unglassed. There is no fancy, desirable stock on our market. The demand has almost ceased, especially for this class of goods. Our market is well stocked with extracted honey, especially with California honey, of which there are about 5 to 6 carloads. The stock of basswood, white clover and buckwheat extracted-honey is light, and the prices are firm.

HILDRETH BROS & SEGELKEN.
NEW YORK, Jan. 5, 1891.

◆

A Pure-Food Bill is now before Congress. In the interest of health and the general welfare, each one of our readers should send a letter to the member of Congress from that District, urging him to call up the Bill for immediate consideration, that it may be acted upon at once. This Bill relates to fraudulent imitations of food and drugs, and this includes honey. All bee-keepers are therefore interested in its passage. At the Detroit Convention this subject came up, and resolutions were passed, as published on page 88 of our last issue.

◆

We Have been adding over 100 new subscribers per week since the new year. That is genuine appreciation!

◆

The Investment of a dollar in the Bee Journal, gives you 52 dividends in a year. Can any one desire a better investment? or will they ask for richer returns?

Illinois State Association.—Concerning the necessity of forming a State Bee-Keepers' Association, for Illinois, we have the following from Dr. C. C. Miller and Mr. C. P. Dadant:

Friend Newman—There is to be a Fair in Chicago. A big Fair. You know about the expectation, as to a bee-keepers' display there. Illinois ought not to be behind any State, in its share of the exhibit. It is one of the leading States as a honey-producer. No State can more conveniently reach the Fair. To make a good display, money is needed. It would be proper, and is entirely possible, to receive something for this purpose from the State treasury. The Illinois Horticultural Society has received aid from the State, when there was no special reason, as at present, for receiving such aid. It is entirely proper that it should, and we think it has received it regularly for a good many years. Is there any reason why bee-keeping should not be fostered by the State, as well as fruit-growing?

But the State will not make an appropriation to us, or to you, as individuals. Neither will it appropriate to the bee-keepers of Illinois, except in some regularly organized form, which shall include the whole State.

Without more words, we should organize, and that too immediately, a State society.

Aside from the big Fair, there are other good reasons for the existence of such a society, but I do not suppose it is necessary to multiply words.

In the little consultation we have had about the matter, Peoria, Springfield and Chicago have been spoken of as good points for a meeting.

Now, Bro. Newman, please call for the views of others, and give your own. Or, how much risk would there be in calling a meeting at an early day? Would not enough respond, to form a good society?

Last, but not least, it may be well to mention that we are not without a man in the Legislature who will have a warm interest for us—one of our own number —J. M. Hambaugh, of Spring, Ill.

C. C. Miller.
C. P. Dadant.

In addition to what I have said, in connection with friend Dadant, let me say a little more. There has been no meeting of the "Northwestern" this year. The poor crop and the Keokuk meeting, made it seem advisable to have none. Still, I think that if one had been called there would have been a fair attendance. We have always had meetings that would compare favorably with any of the State meetings. If a State meeting were called at Chicago, is there any doubt that those who would have attended the Northwestern would be present, with others added? Is there any time in the very near future when we can get reduced rates? Prompt action must be taken, at least prompt enough to give plenty of time to bring our matters to the attention of the Legislature, some time before adjournment. Friend Dadant is the one who deserves credit for starting the movement. Indiana, and other States have sent bee-keepers to Chicago, heretofore.

Would they not do so again? Even if they had no interest in the display of Illinois, they would help to make a good meeting, and we always enjoy their presence. A. I. Root wanted some one to take him by the collar, if he became careless about attending Bee-Keepers' Conventions. If he does not come (if we have a meeting) some one should pull the collar clean off of him.

C. C. Miller.

Marengo, Ills., Jan. 17, 1891.

We heartily agree with our friends Miller and Dadant, as to the *necessity* for a State organization AT ONCE. And to that end, we suggest that a meeting be called by the officers of the Northwestern as soon as possible, and let that body discuss the situation, form a State Association, and incorporate it the very next day. Then it will be ready to apply to the Legislature for a "grant," as other societies have done, and be ready to make arrangements with the Columbian World's Fair Directors, for a suitable exhibit, which shall be a credit alike to the Fair and the great State of Illinois. These suggestions are already sent to friends Miller and Dadant, and we may be able to present something definite in next week's Journal.

◆

☞ Miss Alice, daughter of Mr. and Mrs. T. F. Bingham, was married to Mr. Joseph P. Grimes, on Jan. 8, 1891, at Abronia, Mich. The young couple will reside at Holland, Mich., to which place they return from their wedding tour on Feb. 4. The Bee Journal wishes them happiness and prosperity.

The Honey Bee: Its Natural History, Anatomy, and Physiology. By T. W. Cowan, Editor of the *British Bee Journal*, illustrated with 72 figures and 136 illustrations.

This is the title of the latest book on Bees. It is not a manual for directing the methods of manipulation in an apiary, but a book of 200 pages on the "natural history, anatomy and physiology" of the honey bee. It is printed in the highest style of the art, and the illustrations are marvelously fine. The subject matter is as interesting as a novel and withal highly instructive. It is nicely bound in cloth, and should have a large sale. We have ordered a stock of these books. and can supply orders about the end of February. Price, postpaid, 75 cents.

This book has already created a considerable amount of interest and stir in scientific circles, as there is no other book that treats of the natural history of bees in the same manner. It is already being translated into French and German and will probably be translated into several other languages. The illustrations are new and original, and it has taken a long time to prepare the drawings for them. The result, however, quite repays for the labor.

Tin Honey Cans.—A correspondent in Nevada, Mo., on Jan. 15, 1891, wrote us as follows:

> I wish you would try to get an expression from the large dealers in honey, and the commission men, stating the sizes of tin cans in which extracted-honey sells the best. Also, as to the favor bestowed on kegs. A discussion on this subject by those who handle large lots of honey would be of interest to many readers of the BEE JOURNAL.

We will gladly publish anything that may be furnished on this subject, and invite the wholesale and retail dealers to give us their views and experiences with the different packages for extracted-honey, stating also their preferences and those of their customers.

Trade-Mark for Honey.—The following letter on the above subject is of interest to all:

> Dr. Mason, Byron Walker and myself, were appointed a committee, at the Michigan State Bee-Keepers' Convention, held in Detroit, on Jan. 1 and 2, to try and arrange with the National Bee-Keepers' Union, to have it issue a "Trade-Mark" to its members, to use on honey labels. Just how it can be done, does not occur to me, but I think you, as manager of the Union, can devise some plan to bring it about. If such an arrangement can be made, it will add wonderfully to the ranks of the Union, as well as being a great benefit to the bee-keepers generally. M. H. HUNT.
>
> Bell Branch, Mich., Jan. 12, 1891.

We invite all the members of the National Bee-Keepers' Union, and others who are interested, to discuss the matter thoroughly in our columns, in order that we may arrive at some beneficial conclusion, as speedily as possible.

☞ The first number of the *American Bee-Keeper* is on our desk. It contains 16 pages and a cover, and is nicely printed. The name is unfortunate—it being so much like ours, that there is some danger of its being mixed up with it, especially when its editor calls it a "bee-journal." Another thing is to be regretted: It has inserted advertisements not only without authority from the advertisers, but against their protest, and then offers a "discount on the first order for goods," when mentioning that "journal." When this "special discount" is repudiated, as we are informed that it will be by the advertisers, there will be trouble. It is unbusinesslike in more ways than one, and should be promptly changed. We mention this by *special request* of their advertisers, who are greatly annoyed over the matter.

Bee-Keeping for Profit, by Dr. G. L. Tinker, is a new 50-page pamphlet, which details fully the author's new system of bee-management in producing comb and extracted honey, and the construction of the hive best adapted to it—his "Nonpareil." The book can be had at this office for 25c.

In the Apiculturist for January, Brother Alley remarks thus about the AMERICAN BEE JOURNAL:

> Brother Root says every bee-keeper should subscribe for the AMERICAN BEE JOURNAL. That is just what we have been saying for a good many years. Somehow we manage to keep ahead of Brother Root in most everything except in awarding cash presents to those bee-keepers who invent or devise bee-fixtures. We do not have the money to put out in that line.

In another column of the same periodical, friend E. L. Pratt has this to say on the same subject:

> With regard to paying big prices for contributions, I would remind the readers that the "Api" seems to receive its share of valuable matter, pay or no pay. I look at the matter in this light: A bee-paper is a sort of reformation herald for the pursuit, headed by a leader who has the "sand" to "man" the "tiller" and keep the forces abreast. We are all stockholders in reality, and our dividends are paid monthly, or weekly, as the case may be. The more real heart we put into it, the larger the dividends in valuable knowledge. To the publisher the receipts are small enough at best, and for that reason I do not object (rather encourage him) to deal in supplies, etc.

Then he also adds this ringing commendation, for which we make our politest bow:

> Do you really understand what an undertaking it is to publish a *32-page* bee-paper *every week*. I do, and can say that the task is an enormous one. We cannot be too hearty in our support of the old AMERICAN BEE JOURNAL, for in its success lies the hope of every man who has a dollar invested in bees. To pass it by, would be treason.

◆

Winter Stores.—In an editorial in the *Review*, friend Hutchinson remarks that, for out-door wintering of bees, he wants about 20 pounds of food per colony, and the bees protected. For cellar wintering, 15 pounds will be sufficient.

◆

Supply Dealers desiring to sell our book, "Bees and Honey," should write for terms before issuing their Catalogues.

Colorado Honey Crop.—The editor of the Apiary Department of the Colorado *Farmer*, remarks thus concerning the honey crop of that State:

> Colorado is the only State in the Union that reports anything like a full honey crop this year. The yield is fully double, in pounds, to that of any other year in the history of the State.
>
> The Colorado out-put this season will average 90 pounds per colony, the whole State over.
>
> F. J. Murray, of Fort Collins, shipped 12 tons of comb-honey to Denver recently. This is undoubtedly the largest shipment of honey ever made by a dealer in this State. It is the product of the apiaries of Hon. N. C. Alford, Dr. C. P. Miller and J. S. McClelland. The carload brought $3,000, at wholesale, and was all sold to one dealer in Denver.
>
> J. A. Arbuckle, of Clover Lawn apiary, at Greeley, met with great success in bee-culture during the season just past. He has sent over four tons of extracted-honey to a commission firm in Denver, besides selling 1,000 pounds at home. Mr. Arbuckle extracted the first honey on June 23, and the last on Sept. 1. The largest amount extracted, in one day, was on July 1, when he took 900 pounds from the combs. This is a magnificent showing considering the fact that Mr. Arbuckle has only 140 colonies of bees. He sold the extracted-honey at 7 cents per pound, while the comb-honey brought 15 cents per pound.

◆

Peerless Atlas.—The publishers of the Peerless Atlas have met with a delay in issuing the new edition, containing the promised Census Report of 1890, as they have not been able to secure the official data from Washington, as promptly as they anticipated. The result is that orders for the Peerless Atlas that have been sent to us during the last two or three weeks, have not yet been filled. We have been notified by the publishers that the edition has been completed and that all orders will be filled as promptly as possible, in rotation. Any who may have not yet received their Atlas will understand the delay, and may expect it in a very few days. The delay, as much regretted by the publishers as by us, has been quite unavoidable.

The Programme of the 22d annual convention of the New York State Bee-Keepers' Association (founded by M. Quinby in 1868)), to be held in the State Agricultural Rooms, at Albany, N. Y., on Jan. 22-24, 1891, is as follows:

FIRST DAY—2 p.m.—Call to order. Reception of new members and payment of dues. Report of the Secretary, Treasurer, and Standing Committee. Exhibits of Bees and Honey at Fairs.—Thomas G. Newman, Chicago, Ills.

Evening Session—7 p.m.—Out-Door Wintering of Bees.—J. E. Crane, Middlebury, Vt. The proper thickness of comb-foundation—Is it advisable to use full sheets or starters in brood-frames? Topic for discussion.

SECOND DAY—9 a.m.—Appointment of Committees. Shallow *vs.* Deep Brood-Chambers, Narrow Spacing and Fixed Distances—N. D. West, Middleburgh, N. Y. Are we ready to adopt a standard for the American Italian bee? If so, what are the desirable characteristics? Topic for discussion.

Afternoon Session—1:30 p.m.—Receiving new members, Election of officers. President's address. What Constitutes a Good Bee-Periodical?—W. F. Clarke, Guelph, Ont.

Evening Session—7 p.m.—How has the New Tariff Affected Our Branch of Agriculture? Free Sugar *vs.* Extracted-Honey.—F. B. Thurber, New York. What Our Market Demands.—Henry Segelken, New York.

THIRD DAY—9 a.m.—Artificial Heat to Promote Brood-Rearing.—S. Cushman, Pawtucket, R. I. Queen-Excluders for Comb and Extracted Honey.—John H. Martin, Hartford, N. Y. New Uses of Queen-Excluding Zinc Boards.—F. H. Cyrenius, Oswego, N. Y.

Afternoon Sesson—1:30 p.m.—Bee-Escapes, their Uses and Advantages.—C. H. Dibbern, Milan, Ills. Reports of Committees. Miscellaneous Business.

Pay full fare to Albany, and you will get a return certificate over any road coming into Albany (except the Boston & Albany), at one-third regular fare.

The headquarters of the Association will be at the Globe Hotel.

Samples of honey, apiarian supplies, or anything of special merit in the line of bee-keeping appliances are solicited. All articles for exhibition should be sent to Agricultural Hall, in care of the Association. G. H. Knickerbocker, *Sec.*

Unsolicited and unexpected commendations are the most valuable, trustworthy, and acceptable. Of this kind, the following is a sample of the many indorsements of the *Home Journal*, which come to this office. Mr. Pond is an able attorney, a good judge of literary productions, and a correspondent of a score of good periodicals. He says:

> Allow me to say this: There is no better or cleaner magazine for the home than your Home Journal published, whether we consider its tone—morally, typographically or instructively. It is in fact, just what its title indicates, an "Illustrated *Home* Journal."
>
> Joseph E. Pond.
> North Attleboro, Mass., Jan. 6, 1891.

Convention Notices.

☞ The Annual Meeting of the Ohio State Bee-Keepers' Association, will be held in Toledo, O., on Tuesday and Wednesday, Feb. 10 and 11, 1891. Full particulars as to railroad and hotel rates, and place of meeting, will be given later. Let all interested in bee-keeping make an extra effort to be present on this occasion.
MISS DEMA BENNETT, Sec., Bedford, O.
DR. A. B. MASON, Pres.

☞ The Convention of the Eastern Iowa Bee-Keepers, will be held in the Dobson Town Clock Building, at Maquoketa, Iowa, Feb. 11, 12.
FRANK COVERDALE, Sec., Welton, Iowa.

☞ The 8th semi-annual meeting of the Susquehanna County Bee-Keepers' Association will be held at Montrose, Pa., on Thursday, May 7, 1891.
H. M. SEELEY, Sec., Harford, Pa.

☞ A joint meeting of the Minnesota Horticultural Society, and the Minnesota Bee-Keepers' Association, will be held in Minneapolis on Jan. 20-23, 1891, in Guaranty Loan Building. A business meeting of the Bee-Keepers' Association, apart from the Horticultural Society, will be held at 9 a.m. on the 21st, to adopt a Constitution and By-Laws. The afternoon and evening sessions, on that day, will also be devoted to the bee-keepers. All who are interested in bee-culture should not fail to attend. An interesting and instructive time is expected. A number of prominent bee-keepers will be there. Prof. N. W. McLain, of the Minnesota Experimental Station, an expert on bee-culture, will give an interesting lecture. C. THEILMANN, Sec., Theilmanton, Minn.

☞ The Annual Meeting of the Vermont Bee-Keepers' Association, will be held at the Addison House, Middlebury, Vt., Jan. 28, 1891.
J. H. LARRABEE, Sec., Larrabee's Point, Vt.

☞ The Annual Meeting of the Ontario County, N. Y., Bee-Keepers' Association, will be held at the Court House in Canandaigua, N. Y., on Jan. 28, 1891.
MISS R. E. TAYLOR, Sec., Bellona, N. Y.

☞ The Northeastern Michigan Bee-Keepers' Convention will hold its annual meeting on Wednesday, Feb. 4, 1891, at the Commercial House, in Port Huron. W. Z. HUTCHINSON, Sec.

☞ The Eastern New York Bee-Keepers' Association, will meet in convention with the State Association, Jan. 22, 23 and 24, 1891, in Agricultural Hall, Albany, N. Y., at 10 a.m.
W. S. WARD, Sec., Fuller's Station, N. Y.

Queries and Replies.

Keeping Brood-Combs.

Query 749.—How do you keep brood-combs while not in use ?—Reader.

In a tight hive or box.—M. Mahin.

I hang them in the bee-house about ½ an inch apart.—H. D. Cutting.

In an airy chamber, spaced 2 inches apart.—G. M. Doolittle.

Hang them 2 inches apart on racks, in a dark room ; and if worms should then get in, I fumigate them with sulphur.—J. P. H. Brown.

They should be kept in a close room, and fumigated with sulphur if moths appear.—J. M. Hambaugh.

In close boxes. These are made just the right size, and hold three rows of combs.—A. J. Cook.

In the Spring I put them under a colony of bees, so that the bees must traverse them, when going in and out.—C. C. Miller.

I hang them up in a light room where the air circulates freely, keeping them an inch or two apart.—R. L. Taylor.

I pack them into empty hives, hanging them about 1½ to 2 inches apart. If kept well separated and watched for worms, there will be no trouble ; or very little, if any.—J. E. Pond.

During the Winter I keep them in hives because I have no other place. I put some this Summer in the second story, where the bees had access to them. Another season, if I have any not in use, I shall try the bee-cellar.—Mrs. L. Harrison.

In a dry, closed building, moth proof by the use of screens on doors and windows ; and where the temperature is low, in the Winter.—Dadant & Son.

Keep them in a tightly-closed room or box, and smoke them occasionally with the fumes of burning sulphur. Put the combs in an empty whisky-barrel, with a few lumps of camphor, and head the barrel well.—P. L. Viallon.

I tier them up on the hives until late in the Fall, when all danger of moth-worms is over. After that, they can be kept in any place, away from mice, until needed in the Spring. I have kept them tied up in cotton sacks all Summer. I can keep them in this way for any number of years, in the very best condition.—G. W. Demaree.

I do not always keep them because I get careless. If you have a very cool, dry cellar, the worms will not bother them there. They ought to be a little further apart than when in the hive—say one inch of space between them. If you can get spiders to build their webs among them, there will be no trouble.—Eugene Secor.

During the cold months keep them in any suitable, cool, dry place, away from rats and mice. In hot weather, it will be better to give them to the bees, to care for. A good colony of Italians will care for 2 or 3 sets of frames.—C. H. Dibbern.

It all depends upon the time of year, and whether or not the combs have moth-germs in them. Any of the bee-books will tell you how to preserve empty combs.—James Heddon.

In the Summer time, I have never been able to preserve them unless the bees had the care of them. In Winter, they are better kept out-of-doors in empty hives, made secure against being blown over. Buildings which are more or less open to the weather, so that the combs may freeze, also serve well.—G. L. Tinker.

The bees will take care of the empty combs in the Summer season better than you can do it. In Winter they should be boxed up tightly, after being thoroughly fumigated with sulphur, if they have any moth-germs in them. — The Editor.

If you have a desire to know how to have Queens fertilized in upper stories, while the old Queen is still laying below—how you may *safely introduce* any Queen, at any time of the year when bees can fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc. ; or, in fact everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing ;" a book of 170 pages, which is nicely bound in cloth, and is as interesting as a story. Price, bound in cloth, $1.00.

Wavelets of News.

Color for Hives.

In painting hives, dark colors should be avoided, for in extreme hot weather the combs in such hives will melt down, while in a hive which is painted white, no damage will be done. Such melting down of combs, often comes in the times of scarcity of honey in the fields, so that robbing is started by the honey running from the hive, when the inmates are in no condition to defend themselves; and from this cause, and the spoiled combs, much damage is done.—*Farm. Stock and Home.*

◆

Night-Work in the Hive.

Bees work all night, whenever there is work to be done; and there is always more or less to be done during almost every month in the year. Brood is fed at night, as much as in the daytime. Cells are prepared for the queen to lay in, and the queen goes on with egg-laying just the same. During the honey season more comb is built during the night than at any other time, and both pollen and honey are taken from the cells, where the workers deposit it during the day, placed where wanted, properly packed away and sealed over.—*Gleanings in Bee-Culture.*

When their labor is over for the day, they rest in chains suspended from the ceiling of their habitation, one bee clinging by its fore-feet to the hind-feet of the one above it, until it seems impossible that the upper one can be strong enough to support the weight of so many hundreds.—*Exchange.*

◆

Dead Bees About the Entrance.

During the Winter season, it is very common to see quite a number of dead bees about the entrances of the hives. Many become alarmed at the sight of this, and conclude that there is something wrong, and, in their ignorance, tear up the colony, to make an examination, only to find that all is apparently right. This untimely handling and disturbance in cold weather, is very hurtful to the bees, and in all such cases there is no indication of anything wrong.

Bees die off daily, in great numbers, throughout the entire year, but during warm weather, when they have the liberty to fly every day, these dead ones are carried off by the colony, and they disappear unnoticed by us. But, during Winter, they die and drop to the bottom-board and collect there, and on the approach of a warm day, the bees carry them to the entrance, and drop them outside. It is not unusual to find quite a handful of dead bees lying at the entrance, on such occasions. There may, at times, be as many as a pint of them, and no serious damage may be expected. All unprotected hives will produce more of these dead bees than those that are well protected.—A. H. Duff, *in the National Stockman.*

◆

Alfalfa-Clover Honey.

Alfalfa honey is not only the finest in appearance of any honey that I ever saw, but it is also equal in flavor. It is almost, if not quite, as clear as water, and yet, during a hot July day, it will scarcely run. It is as clear as a crystal, and exquisite in flavor. Very likely the producer has not a ton of such honey; but if he has, I should think it would be a small fortune, if he could get it before the class of people who buy gilt-edge butter, and things of that sort. And, by the way, we are using alfalfa honey on our table, day after day. I never ate any other honey that suited so well, and for so great a length of time. At present the outlook seems to be that alfalfa honey is destined to lead the world.—*Gleanings.*

◆

Fertilization of Plants.

Bees serve as active agents in the fertilization of plants, and are not destructive in the least degree. They are profitable, because they gather and store up that which would be entirely lost, without their aid. They work in places that are rarely seen, and the fence-corners and neglected spots are often valuable pasture fields for them. Though regarded as resentful in nature, yet they can be cared for easily, for, like animals, they are conquered by kindness.—*Exchange.*

◆

Degenerate Italian Bees.

I have for years kept Italians, bringing in a fresh imported queen every year or two. After keeping that up for a number of years, I reasoned that as there were very few other bees in the neighborhood, the Italian blood must predominate so much, that if left to themselves, my bees would very soon weed out the one-banded fellows. Although I have had no pure blacks for years, I soon found that I had two or three colonies that were simon-pure blacks, at least so far as color was concerned.

Now the question is, did my yellow bees turn black? or, were the few surrounding blacks so powerful in character as to overcome them?—Dr. C. C. Miller, in the *Apiculturist.*

Bees do not mix the Honey.

Bees, in their search for honey, visit only one kind of flower on the same trip. This is not accidental, but it is a wise provision for preventing hybridization of different varieties from the pollen which bees always distribute in their journeys from flower to flower.—*Exchange.*

Extracting in Cold Weather.

If your surplus combs are not yet extracted, keep them in a warm room a half-day. Then the machine will as readily throw out their contents, if still liquid, as at any time during the Summer. —*Farm and Home.*

Bee Fever.

This is a peculiar contagious fever to which we are all liable; ministers, lawyers, and even doctors of medicine, have been known to yield to it in a way that is wonderful. I had an attack of it, myself, 12 years ago, and while the first stages were the most severe, it continues in my system to-day. Honey is an excellent medicine, but when given as a remedy for bee-fever, it will invariably have the effect of making the fever more intense.

Bee stings are said to be good for rheumatism and they are also good for bee-fever; I know of several cases where bee-stings have given permanent relief. In the Spring of 1881, I had a shipment of very cross bees, from Mississippi, which came near giving me permanent relief; they pinned my clothes fast to me, and had about cured me, when I gave them Italian queens, and then they would not sting me any more. The result was that the fever came up to its highest pitch again.

In 1883, I "swarmed out" and went to work for A. I Root, at the Home of the Honey Bees, while my stay there was very pleasant indeed, a letter from home stated that my bees had wintered successfully: this was too much for me, and I returned to the parental roof, on the limited express.

The same season I succeeded in getting 1,600 pounds of honey from my 11 colonies, and increased them to 21, by artificial swarming.

The following season they increased to 50; the honey season was a failure, and I was obliged to feed them nearly two barrels of granulated sugar, in order to pull them through the Winter.

When it comes to the point of feeding 50 colonies that are almost destitute of stores, it comes near being a remedy for bee-fever. I might have been cured then and there if somebody hadn't whispered to me that everlasting sticking to a thing is bound to bring success.—Walter S. Pouder, in *Indiana Farmer.*

Strengthening Weak Colonies.

If from any cause a colony becomes weak in the Fall, I have adopted the following plan to build it up with very satisfactory results:

I usually take off the surplus sections late in the season, and in them are quite a number of young bees that cannot well be driven out with smoke, neither will they desert the caps, or leave the sections after being placed in the cellar or honey house.

I take the sections in which the bees are clustering, to the colony I wish to strengthen, and after first thoroughly smoking the bees in the hive and sections also, I brush the bees off, in front of the entrance, and they will scamper into the hive as lively as in swarming time, and be readily accepted.

Thereafter young bees can be introduced from any hive without smoking, and without any objection on the part of the bees formerly introduced, or members of the old colony, as they have, by this time, become accustomed to the influx of strangers, and accept their presence as a matter of course, for they soon learn that they are peaceably disposed, and not there for the purpose of robbing.

A few bees from a number of prosperous colonies will never be missed; whereas, if a frame or two is abstracted, the loss will be apparent next Spring, and the bees in those hives, thus robbed of stores and brood, will not commence working in the surplus arrangement, nearly as soon; not until the loss has been made good. It will not do to borrow from Paul to pay Peter, in a wholesale way; at least, that is my theory. One colony in my apiary, built up in the manner above mentioned, are, at this writing, as strong as the strongest.—A. C. Tyrrel, in *Apiculturist.*

Address to the Honey-Bees.

W. J. CULLINAN.

Now rest, oh, busy toilers !
Your working days are o'er ;
You "made hay while the sun shone,"
From hill and dale you bore
The sweets we prize so highly,
And love to have in store.

You've won sweet rest, enjoy it,
And if you can, be gay ;
Sip deep your cups of nectar,
And this shall be your pay,
For honest, faithful service
You've rendered day by day.

We strove to guide your efforts,
And sought, without abuse,
To turn them in our favor,
And mould them to our use—
And by manipulation
Endeavored to induce

Your tireless, toiling forces
To work as we should guide,
And bear the precious nectar
From fell and flowery side,
And store in white an' snowy comb—
The apiarist's pride !

Yet, lo, we did not drive you—
Let instinct do that part—
Perhaps you work'd no harder,
Play'd just as light a part,
As if you toil'd in tree or cave,
Unfettered by our art.

No doubt you dine as richly,
Forsooth, shall dine as long,
As bees out in the forest,
Or rocks and caves among ;
And will come through the blizzards
In numbers quite as strong.

So "calmly rest, and sweetly sleep,"
In that "ideal hive" of mine.
Till the snow has left the hillside,
And the sun has warm'd the vine ;
And warmer winds an' softer skies
Proclaim th' approach of spring-time.

Then, wake ! and to your labors
Go, with your old-time zeal ;
And labor then, as always,
Unto your master's weal—
Proclaiming thus the wonders
That little things reveal !

Quincy, Ills.

Why Complain because others do not agree with us? a little reflection would show us that each one's conception and understanding, must be according to their culture and experience.—*Exchange.*

Topics of Interest.

Essays at Conventions.

EUGENE SECOR.

I have not been as regular an attendant at, nor of as long experience in, conventions as Dr. Miller, but I cannot agree with him in the essay controversy.

In my limited knowledge of convention work, I have been led to believe that those meetings were the most satisfactory where the principal work was blocked out in advance, and some plan followed. It does not always happen that the ones assigning topics make the best selections, or the best persons to treat them, but if a mistake is made one year it need not be repeated the next. It is impossible for persons in charge of such matters to always know the best men to put on the programme. But a convention called together, without any definite work for it to do, is a good deal like a mob, and there are but few presiding officers capable of directing the deliberations of such an unwieldy crowd.

I believe in assigning topics for discussion and designating a member to lead. Whether he does so by a carefully written paper, or orally, depends on circumstances. If a report of the meeting is to be published, and no stenographer is present, I think the written paper best. In any event it ought to be as well prepared as the ability and time of the leader permits. The subject, then, is before the convention for discussion.

I agree with the Doctor that all subjects are not proper for such meetings, but who is to be the judge? We are not all made after the same mental pattern any more than corporeal. I might get the laugh on the Doctor by saying a bee convention was no place to tell "How Sockery Set a Hen," nor to illustrate the weakness of parental government, when besieged by juvenile questions, while reading the story of George Washington —but I will not do that because *I* like my intellectual food seasoned quite as well as I like pepper and salt in my victuals, and I go to conventions quite as much for the social enjoyment I get out of them, as for any new thing I expect to hear pertaining to bee-keeping.

I wish to say though, in the matter of essays and discussions, that I think the sessions ought not to be prolonged to interfere with the cultivation of those social qualities, which are only to be discovered by closer personal contact than even a convention allows. I am glad that Mrs. Harrison calls for a recess once in a while, when she is present. It is hard work to sit in a public audience 10 hours a day and behave well. Essays are not the cause of these long sessions, but the discussions which follow. Perhaps there ought not to be so many of them, curtail, if you will, but do not prohibit.

Did you ever see a public meeting of any kind, from Congress down to the "town meeting," where a few persons did not do all the talking? The only exception I know of is the Methodist class meeting, where each one is called upon to express himself. If that plan could be followed at bee conventions perhaps the essay might be left out. But it cannot. All will not talk even if called on. I would put the non-talkative on for essays and let the voluble ones air themselves on their feet afterwards, under a rule that no one should talk over 5 minutes at a time, nor more than once on the same subject, until all have had an opportunity to be heard. I do not agree that it is necessary or desirable that everything should be written from a practical standpoint.

A good many attend conventions who are not specialists. If every thing were planned for the latter only, it might not interest the others.

Finally, Doctor, will you not admit that we had as good a time at Keokuk *with* essays, as at Columbus in '88 without them.

Hot Weather and Thunder Storms.

"RAMBLER."

I wish to congratulate "the old reliable" upon its new dress and improved appearance in general. If the editor after the several poor seasons we have had, has the courage to make such improvements, the bee-keepers, certainly, should also keep up courage and prepare for the grand honey flow that is coming by and by.

Writing of improvements reminds me that there seems to be an epidemic of this sort among the Journals. The *Review* was the first to put in its enlarged form and beautiful title page. A journal so neatly gotten up is worth many dimes a year just to look at.

The *Apiculturist* comes next with its bright face, and its characteristic ideas, all fresh and breezy. Our literature without an Alley would be dull indeed. Bee-keepers can well be proud of their journals.

While chatting with you, Bee Journal, I wish to give a pointer to Mr. Bull, as he invites experience on page 810 of last Vol. I would say that my experience is directly contrary to that of Mr. Bull. The greatest and most encouraging honey yield ever produced in this county, was during a season of frequent and sudden thunder storms. The weather was extremely hot, and the bees were working upon basswood early and late. Several short but explosive thunder showers would come up during the day, and after each, how the bees would work. They drew out in such force that we expected to see hives and all go to the woods, but they were too heavily loaded with honey to move. One hundred pounds per colony was our average yield that year. Give me the hot weather and the thunder storms.

Hartford, N. Y., Jan. 6, 1891.

Identification of Foul-Brood, etc.

R. L. TAYLOR.

Though I discussed the subject of foul-brood at our last annual meeting, I have, at the request of our secretary, prepared a sort of supplemental essay on the same subject.

And, first, I shall add a further word to aid in the identification of the malady. Enough has been written about sunken and perforated cappings, and the color and viscid character of the brood, having recently died of the disease.

In the case of weak colonies generally, and of all colonies during the breeding season, some of these indications will be found, if the disease is present, and will furnish certain means of a correct diagnosis; but it is to be noted that after the breeding season is well over, a strong colony, though badly diseased, exhibits none of these indications. The cappings, if ever present, are all nicely cleared away, and the dead brood is entirely dried up; mere scales, almost of the color of the comb itself, lying fast to the lower side of the cell, and drawn back, more or less, from the opening.

I have samples of affected comb with me, one of which illustrates this point, though the sample is hardly a fair one, as the scales resulting from the dead brood are more apparent than they usually are, being less drawn back and thicker, and rather darker than they are often found.

To detect the disease in strong colonies, some little time after brood rearing has ceased, open the hive and apply your nostrils directly to the combs, as they hang in the hive. If the disease is present, to any extent, and your olfactory organs are sensitive, you wlll detect an odor more or less strong which may be described by the term "old." But not many, at least at first, could say, by this test, with any degree of certainty, whether the bees of that colony were diseased or not. It is to be taken only as an indication. Now, take out 3 or 4 combs, one by one, from near the center of the brood nest, and hold each with the bottom bar from you, in different directions, until the light strikes well into the *lower side* of the cells, when, if affected, the scales I have described are very evident. The sample makes this plainer than any amount of description could do.

In contending against the evil, there is nothing so important as an active knowledge of the sources whence the danger of spreading the contamination arises. With this knowledge, I am convinced that there is little necessity for fear that the disease will spread to healthy colonies, if only the sources are within reach of the apiarist. If many wild bees, among which it has a foothold, are in the vicinity, it must become eradicated there, in the course of nature, before the apiary is safe, for every wild colony affected, will, in time, surely die, and its honey, if any be left, will be appropriated by other bees, and the plague unavoidably disseminated. This danger cannot be well guarded against, but those at home may easily be reduced to a very small figure. They fall under three heads; those from affected honey, from affected combs, and from affected hives.

Under the heading of hives, is included, of course, all their paraphernalia. I think the principal danger from this source, arises from affected honey, which may have been left on the parts of the hive, by daubing, or otherwise. No bee should be allowed to visit them, and as soon as it may be safely done, they should be boiled in water, scorched with flame or burned up. Either method is effective.

Affected combs are dangerous, not only from the honey, but also from the dead brood, which they contain. Every dead larva is a bundle of seeds, and when moistened by honey, new brood, or otherwise, they are released and carry death wherever they go. Such combs are safely rendered innocuous by fire, or boiling only. The extremest caution, in changing combs from one colony to another, should always be observed. There is no more certain and rapid way of propagating the malady.

Infected honey itself, however, is the chief medium by which foul brood is disseminated, and so, in it, is the principal source of danger. The bees are sure to contract the disease thereby, whether they obtain it by deliberate feeding, on the part of the apiarist, by gathering up what is carelessly allowed to drip and to be left exposed about the apiary, or by robbing.

When once pointed out every bee-keeper should be able to guard against the danger arising from the feeding and the dripping of honey; but to secure protection against robbing extraordinary care is often required.

If bees were deprived of their disposition to rob, foul-brood would soon be eradicated. This cannot be done, indeed to one who has had to deal with the plague, this disposition seems to be increased thereby. The more powerful nations of Europe keep their eyes upon the Turk, as the "sick man," watching for the occasion when they may profit by his dissolution. The bees emulate the example of the nations. As soon as they catch the odor of the disease, issuing from a hive, they promptly label it "the sick man," and eagerly watch and wait, and at length, unlike Russia, Austria and the rest, instead of holding each other in check, they all turn in at the nick of time to complete the work of destruction, and like many a human individual and nation, find the seeds of death wrapped up in their ill-gotten wealth.

From infected colonies that are reasonably strong, and in good heart, with sound hives, having moderate entrances, I would not apprehend immediate danger, but would keep a sharp lookout for the impending decline. It behooves him, whose bees are infected, whether or not he obeys the general injunction, to "keep all colonies strong;" to be instant in his efforts to keep all diseased colonies strong. No one will understand me to advise building up such colonies. I mean only that no weak one, in a diseased condition should be tolerated for a single day, and indeed it is to be hoped that this advice will be seldom applicable, for it is to the interest of every apiarist to banish the disease, by the most effectual method, as speedily as possible.

I need hardly add, that the taking of bees from a diseased colony, and adding them to a healthy one, would as certainly convey the disease in the honey carried, as though it was fetched by robbers.

I shall close here, for I am sure that if due and timely heed be paid to the directions given herein, and in my essay of a year ago, no one need be greatly alarmed, nor very seriously damaged, by foul-brood, and I only hope that none of you may ever need even to call them into exercise.—*Read at the Michigan State Convention.*

Adulteration—The Bee-Keepers' Union.

JAMES HEDDON.

At our late State convention at Detroit, many of our members were greatly surprised to find several lots of adulterated honey still upon the market, especially in the metropolis of this State, where we were in convention assembled. It was all labeled "Michigan Strained Honey" or something of the kind, which clearly gave it away to those who were posted in such matters, to say nothing of the flavor being wholly different from that of almost any grade of pure honey.

The question came up what to do. It was finally proposed to have a trade mark that was protected by law, and which every bee-keeper who belonged to the association, procuring the same, could use. Then the daily papers, and, in fact, all the papers of the country will take the thing up. I think I know just how to get them to do it, and that too, without charge, and soon consumers everywhere will be educated to the facts that producers never adulterate because they cannot afford it, and that they can instantly discern which packages were put up by producers and which by adulterators or city packers.

Then it was proposed that the National Bee-Keepers' Union should get the trade mark, and all persons belonging to it, and only such, should have the right to use it. The writer remarked that he did not believe the government would issue a trade mark to a corporation to be used legally by its various members. This matter was left in doubt, for the committee, which was then and there appointed, to decide upon.

After the convention I visited a friend and old schoolmate, one of the best patent lawyers in the United States, who resides in Detroit, and he cleared the matter up immediately. A trade mark will cost $40, and is good for 30 years. He immediately agreed with my suspicion, and at once made it a belief, or knowledge rather, that the Union could not procure a trade mark, unless they were incorporated, and then it would not be legal protection to its various members whose business interests were entirely separate from each other. "But," says he, "Any one member of the association can procure the trade mark, which will cost $40, and then he can transfer individual rights to as many persons as he sees fit, guaranteeing each one the same protection as the person to whom it was issued."

It seems to me that this is liable to be the result. It will make it an object for every person who raises honey to sell, to join the Union, for the trade mark alone will be worth more to him than the annual dues to the Union, and the $40 which the trade mark will cost, can be taken out of the Union treasury, and will hardly be felt. The president of the Union or some other individual could procure the trade mark for all, the design of which should be something striking and unique. Now what shall it be? In a council of many, surely wisdom exists and something just right should be brought forth, and no doubt will be. Do not forget, Mr. Manager of the Union, that any person joining the same who has trouble on hand, or known to be brewing at the time his application was made, is not eligible to the protection of the Union for that case. Please make that clear to your solicitors.

This trade mark will, in reality, be a patent. It is the same thing, produced in the same way, and protected in the same way, by the same government, and solicited through the same office.

But now, friend Newman, I am happy to state, that it will receive no opposition from our friend A. I. Root. We had him at this convention, and we had a good time discussing the question of the right of property in inventions. We told him what we thought, he told us what he thought. President Cook, our State entomologist, fairly sat down on him, of course in a friendly spirit, and as though he was not enough, great big Dr. Mason came down "ker-thump" and our State senator and lawyer, as well as the veteran bee-keeper, R. L. Taylor, threw in his mite, and finally, friend Root said he was sorry if he had ever given the idea to his readers that patents were not honorable property. He did not mean to do it, he said, but Professor Cook said he certainly had done it, for he knew that was the impression gathered by his readers. We all hope hereafter, that friend Root will be fairer with this most dignified of all property rights, because it must not be forgotten that one of the greatest jurists living or dead, said:

"The right of property which an inventor has in his invention is excelled in point of dignity by no other property-right whatever. The benefits which he confers are greater than those which he receives. He receives from the Government nothing which costs the Government or the people a dollar or a sacrifice. He receives nothing but a contract which provides that for a limited time he may exclusively enjoy his own. Letters-patent are not hurtful monopolies."

Now let the Union procure this patent mentioned above (the trade mark), for I believe it will result in protection to honey producers, and tend to largely swell the membership of the Union, which, it now goes without saying, has been one of the best and most useful organizations ever originated by bee-keepers.

Dowagiac, Mich.

Apicultural Inventions.

ERNEST R. ROOT.

Your committee has assigned a rather difficult subject for me, and I must acknowledge that I am somewhat at a loss as to how to handle it. Webster's New International says, that an invention "is the act of finding out something which has not before existed." This last clause would throw out of the category nine-tenths of the so-called inventions. In this connection it should be observed that the field for original invention is narrowing down. The older the science or industry, the more limited the opportunity for real invention or startling innovation. Inventive genius has, then, to content itself simply with the improvements upon different applications of old or existing principles.

In electrical science, James Heddon tells us, on good authority, that all the inventions of the present time are simply mechanical improvements, and that no great innovation may be looked for, and I would add that apiculture is no exception. Our own Langstroth and Quinby gave us the first practical movable-frame hive, Major Hruschka the first extractor, and Mehring the first real comb-foundation. These three are the great inventions in our beloved industry, and I think I can say truly, that, with few exceptions, all others are simply applications or improvements. Am I stepping on somebody's toes? No. It takes a genius to improve or to make a new application of an old idea.

Now then, in answer to the question, "Are Apicultural Inventions in Demand or Excess?" I answer, "Yes," and "No," to both. Although there may be an apparent contradiction in this, there is none in reality. Yes, apicultural inventions, or, if you please, improvements, are in demand. There never was, and never will be, a time in our history, when some invention will not be needed to accomplish certain desired ends. We often hear it said, that, if some enterprising Yankee would get up an invention to accomplish so-and-so, he would make his fortune.

Much has been said about the world not rewarding inventors. There is, no doubt, some foundation for this, but there is more ado made about it than the facts really warrant. The world at large is looking for. and ready to reward, some Edison, some Westinghouse, some Watt, some Ericsson, or Gutenberg, to invent or discover some device or process whereby certain economic ends may be accomplished.

As I have already intimated, our industry is one of the old ones. Since we have had a Langstroth, Quinby, Hruschka and Mehring, we cannot expect to make any startling innovations, but there is a big field yet for *improvements*.

Well, if apicultural inventions, or, if you please, apicultural improvements, are in demand, what are one or two of them, for example? As to implements, I would suggest that we need a good reversible extractor, that shall not be too large or cumbersome. Whether such can be obtained, is a question. Again, we need some method whereby all bee-keepers can prevent swarming, and yet not interfere with the honey crop. There are several ways of preventing it, but none that seem to be generally accepted or adopted.

These are but two, and I might suggest others, but I will sum all the rest of the needed inventions into this: We want inventions, or new methods, whereby we can produce better and more honey, and do it more cheaply. We have seen that, during poor seasons, it is a difficult matter to raise the price of honey in proportion to its scarcity.

What we must have, then, is cheaper production. Possibly what we need is fewer fixtures and fewer inventions, and more economy in labor and in time. If that is the case, the field for improvement is more in *methods* than in the *invention* of devices

I have shown that inventions are in demand. I now propose to touch upon the other side of the question, namely, that they are in excess. Some inventions are like some men—it were better that they had never been born. Many of the so-called inventions have been a positive curse to our industry. Beginners, and over-enthusiastic bee-keepers, have adopted them at a large expense, only to find that they were a delusion and a snare. And, too late, they discover they might have tried a few to see whether that number would justify the adoption of a larger number.

In my travels recently among the bee-keepers, I ran across three or four, who, having been over-enthusiastic in regard to the merits of a certain hive, had made and put into operation anywhere from 50 to 500. They had carefully tried them, and had found them wanting, and, at the time of my visit, I found the hives stacked up by themselves, as it were, a monument of apicultural foolishness, and their owners well nigh discouraged. Of course, they argued that bees did not pay very well, and had come to the general conclusion that the hives recommended by Quinby and Langstroth were best, after all. These are by no means isolated cases. I hear of it through correspondence too frequently. It behooves editors, then, to be careful what they recommend, or place before the public.

Perhaps it would not be too sweeping to assert that about nine-tenths of the apicultural inventions are absolutely useless. They are a damage to the poor people who are duped by them, and a positive loss in time to the inventor. Impractical inventions, as a rule, are dreamed out by impractical men, and it would be better if they never appeared in the pages of a bee-periodical.

A good many things that we younger ones *think* we have discovered, were years ago mentioned and described by Father Langstroth and Father Quinby. The most, I think, we can expect to do, is to improve upon some old method or device. While I would not discourage invention, I certainly would warn the novice against wasting too much time in trying to get up something that will be vastly superior to anything else ever thought of, or dreamed of, by the fathers of apiculture.

There is just one thing more I should like to speak of, although it is a little foreign to the treatment of the subject as above; and that is, a sort of jealousy among some of our apicultural inventors as to who first originated or devised this or that thing. The priority of claim rests not upon either one of the disputants, as a general thing, but upon some poor obscure bee-keeper who does not care, who may have the credit of the idea, so long as he and his bee-keeping friends are benefited. He is not going to lie awake nights to worry over it, anyhow.

I speak of this, because I have seen a little undercurrent in some private correspondence that passed through my hands, and as long as the idea is simply an improvement upon an old method, and not legitimately an invention, what matters it who has the credit? If we are jealous at all, let us be jealous for each other—jealous that some one else may have the honor rather than we.—*Read at the Michigan State Convention.*

Some Apicultural Notes.

J. M. YOUNG.

A mild, pleasant Winter.

The New Year came in like a lion in this locality, with a northwest wind, accompanied with light snow.

Bees were out enjoying the genial warm sunshine, some two or three days during the holidays.

My notes written for the AMERICAN BEE JOURNAL, will be chiefly directed to beginners, but specialists may read them too, if they want to.

Closed-end frames "don't hit us" very well.

The AMERICAN BEE JOURNAL comes to my desk this week, in a brand new dress of beautiful clear type. It is now a 2-column, 32 page folio, and chock full of reading matter.

Dr. Miller, a prominent apiarist of this locality, is fixing up his business to leave us and go south for his health.

I have quite a lot of extracted honey that has not candied yet, and the prospects are that it will remain in its liquid state all Winter. It was gathered from Fall blossoms and from a rosin weed that abounds abundantly in this vicinity.

Now is a good time to post up on Bee literature during the long Winter evenings. If you do not take a bee-periodical, subscribe at once, for you cannot keep bees intelligently unless you keep posted. The AMERICAN BEE JOURNAL and *Gleanings in Bee Culture*, take the lead over all periodicals published on this subject.

Preparations for next season's work should begin now. A great deal can be done during the Winter toward fixing up boxes, refitting hives and a thousand other things that will have to be done before a crop of honey can be secured. Now is the time to do it. If you have not a house or work-shop to work in, you should have.

You will make more money from your bees by letting them swarm naturally. If you want to work bees just for fun, and have penty of money to spare, by all means use the artificial method. I work bees for the money there is in them and not for fun.

I only obtained a little over 1,500 pounds of honey this season all told. Remember, I only had 41 colonies to start with in the Spring, and from this number I only obtained 20 new colonies. I well know that this is a bad story for an experienced apiarist, but I wish somebody would tell me how to get a better result in a poor season.

"Stray Straws," edited by Dr. Miller in *Gleanings*, takes my eye, and I believe is going to be interesting.

Ventilation in Winter Repositories, etc.

E. C. EAGLESFIELD.

About 8 years ago I bought 3 colonies of bees in Langstroth hives, I got them in the Fall to winter them. I placed them against the south end of the house facing them south, packed straw all around, except in front and put an old sap pan over them to keep the rain off. I found them all dead before Spring, death being caused by too little ventilation. There were 5 colonies when I got them, with lots of honey.

As I was away from home that Summer most of the time, I did not buy any more bees, but the next Spring I bought some more and they increased to 9 colonies. I placed them in the cellar and before Spring the mice had destroyed 3 colonies. Since then I have always kept strychnine for the mice with good effect. I take a cookie and moisten one side, then place the crystals of strychnine all over it and lay it where nothing can get at it but mice and rats. I then bought a few weak colonies which made 11, spring count, and they increased by the Fall to 48. My best colony, in a box hive, gave 8 swarms, and as it was bees, and not honey, I wanted, the swarming pleased me. I fed them about 500 pounds of sugar for Winter stores, and they wintered nicely, but when I set them out in the Spring I thought my queens were all dead and that the workers were laying. There would be a spot on the center combs with a dozen eggs or more in a cell, some just laid, but the most of them shriveled down very small. Things changed in 3 days when the bees began to get pollen, and I was happy when I found all my queens laying and brood being reared well.

My bees increased that year and the next, to 150 colonies, and 4 years ago I got 3,000 pounds of white clover honey, the most of which brought me 15 cents per pound, which disappointed some persons who said my bees would bankrupt me. They more than paid all the expense I had been to. That Fall I sold all my bees but 25 colonies, and moved them 15 miles to where I now live. As the cellar was in bad condition, only 11 colonies survived. They were in the finest condition when placed in the cellar.

A neighbor, who bought 25 colonies of me, never lost a colony. I moved his at the same time and the same distance, as my own, but they were placed in a different cellar. I mention this to show that it was not the pollen that killed mine, but the poor repository, as the condition of the 2 lots of bees were as near alike as 2 peas.

The next Summer I rebuilt my house and in the Fall placed 16 colonies in the cellar. All came through the Winter and Spring strong, without the loss of a single colony.

The next Winter I put 74 colonies in the cellar, with the same result as the previous year, so a year ago last Spring, after buying 8 more colonies, I had 82 to commence the season with. They gathered 9,300 pounds of comb-honey and 700 pounds of extracted, and came through last Winter and Spring without losing a single colony. They had increased to 137 colonies and I sold 40 in the Fall, so that left me 97, Spring count. They increased (including my nuclei after being united), to 135 and I placed them in the cellar on Nov. 6, which was 9 days earlier than I ever placed them in before. They have every appearance of wintering nicely so far, and if nothing happens to cause the cappings of the honey to crack, I expect every colony to come through all right.

I think nearly ½ of the bees in this section died last Winter. There was only 1 colony died out of the 40 I sold last Fall, and that, I think lost their queen in moving.

Last season was the poorest for Honey I have ever known, I think many colonies will starve this Winter if not fed, that is, colonies kept in box hives and black bees who are not looked after.

My bees are Italians, and I have never yet found them short of stores in the Fall. They did well last year, considering the poor season, and gathered 2,500 pounds surplus, many of the hives being too full of honey to handle well, some weighing 80 pounds with the cap off, when 50 pounds is the usual weight for Winter.

The honey this season is dark, being gathered from mammoth and alsike clover. A neighbor told me that my Italians were just swarming on his mammoth clover. I would like to know if anyone has had any experience in this clover as a honey plant.

I would like to say something about the cause of bees dying in Winter, but you will probably think this article so long and dry, that the waste basket will be the place for it. I used to think so, when they were taking up so much space with the pollen theory. Now I believe that pollen will produce bee-diarrhea, but do not think it is the cause of so many bees dying. I find that extracted-honey, if it be so thick that it will not run, if placed in a damp cellar over night, will become so thin before morning, that it will run like water. Then, if placed where it is a little bit warmer, it will soon sour and kill bees every time, if they are confined. The reason why bees winter better on sugar syrup, is that it does not dilute and sour like honey. Just try it and see.

If a colony of bees are left out till the outside combs are frozen so as to crack the capping, the honey will sour, and good-bye bees; or if there be much dampness in the hive, so that the combs are covered with drops of water, it will have the same effect.

Some people say that honey dew will kill bees; my bees never wintered better than last Winter and some hives were full of it. It is not the kind of honey, it is not the pollen, but it is simply the condition of the honey.

We are eating honey 2 years old, which is thick and waxy, and, although some cells are not capped, it is not granulated a bit, and I have had it 3 years old just as good.

My honey is kept near a stove-pipe, where there is fire once a week in Winter; this keeps it all right. Our pantry is damp, I placed a crate of this honey there for a few days, and all that was not capped became very thin, and is not fit to eat.

Berlin, Wis.

The Best "All-Purpose" Queens.

W. Z. HUTCHINSON.

The topic that has been assigned me by the secretary is: "The best all-purpose queens, and the best manner of rearing them." I have wondered quite a little why he used the words "all-purpose." I supposed queens were all for one purpose, that of laying eggs. I do not suppose I would rear them any differently, if I were to have their offspring engage in storing extracted-honey, than I would if their progeny was to be engaged in the production of comb-honey. If I were to engage in rearing bees or queens for sale, I suppose that I would not attempt to rear queens differently in order to endow them with different qualities.

In the premium list of fairs, I have seen premiums offered for an "all-purpose" bee-hive, that is, all things considered, a hive that is best adapted for raising either comb or extracted-honey, or for either cellar or out-door wintering. I can see how the words—"all-purpose"—might be applied to a hive, but when applied to a queen bee, they lose their meaning.

I might say, in passing, that I am opposed to an "all-purpose" *anything*, whether it is a queen bee, a bee-hive, or a new milch cow. These combined "all-purpose" articles, must succumb to the *special* purpose machine.

While I have criticised the use of the words "all-purpose" as applied to queens, I am willing to admit that much of our success centers in the queens. I cannot go so far as some, however, and say that all centers in the queen. Of the factors under our control, that go to make up our success, I think location, hives, combs and management, are fully as important as the queens.

We need queens that are sufficiently prolific to fill the combs of an *ordinary* brood-nest in the early part of the season. Many plead for extraordinary prolificness as a very desirable quality in a queen. If queens were expensive, costing even $100 each, there might be some excuse for desiring prolificness in a queen, but, as they are ordinarily reared by the bees, when left to do this work themselves, they practically cost nothing, and there is no excuse for not having enough of them, so that there will be no need of "horse-whipping" them, as Mr. Heddon puts it.

As to the rearing of queens, I know of no better way, for the honey producer, than that of simply allowing the bees to follow their own instincts. Young queens, those under two years of age, usually are the most desirable. They begin laying earlier, fill their combs more completely, and bring their colonies out in a more populous condition at the beginning of the white honey harvest. There is less disposition to swarm with young queens, and the same may be said in regard to the building of drone comb if swarming occurs, and foundation is not furnished.

As to the rearing of queens artificially, so to speak, I should strive to secure the same conditions as those under which they are reared naturally. There must be warmth, food in abundance, plenty of nurse-bees, and nothing but eggs or just-hatched larvæ for the bees to develop into queens. As to the details of commercial queen-rearing, each breeder is a law unto himself, and I think I have now said enough to start the discussion upon "The best all-purpose queens and how to rear them."—*Read at the Michigan State Convention.*

Mode of Wintering Bees.

O. R. HAWKINS.

I put 5 colonies into Winter quarters about one month ago, one of which I am afraid I shall lose before next Spring. My method of wintering is very simple, yet it is as good as the more costly way. I nailed 2 sticks to my stand, put a top piece from one to the other, and then braced them well and put my hives all together and stacked corn-stalks around them on 3 sides, leaving the south side open.

To keep the corn-stalks in place, I put 2 pieces of wire about them, 1 near the top, and the other at the bottom. A piece of rope or old cord would have done just as well as I used old cord the two previous Winters.

When Spring comes, all I have to do is to unfasten the wire, throw the stalks in the stock-yard, give the frame a lift, set the hives in their old places on the stand and everything is in order.

The apiary is in a nice grove, or more properly speaking, a strip of oak and pine trees, 20 feet across and several hundred feet long, and a more beautiful spot cannot be found.

Two years ago I saw that the bees were in great need of something to light upon when they came to the hive, and to fly from when leaving it, so I invented a fly-board. It sits snugly up to the face of the hive and if the wind or anything else troubles it, put a nail, or screw, through it into the hive, or stand.

I placed a colony in for the Winter, and when I looked at it yesterday the bees were in splendid condition. Do you think they will freeze before Spring, or die from anything else? They were a small colony and only filled their hive half full of comb, which was packed with honey.

The weather has been fine though severe, and windy at times, I could not have wished for better. The prospects for next season look good. The last hive in the apiary in Brookhaven, the nearest town east of me, has been destroyed by moths. The apiary at East Patchoyac has been gradually reduced from 27 colonies to 3. In a year or two I will be the only apiarist left for miles around. I have increased from 2 colonies and learned from experience.

Bellport, N. Y., Dec. 24, 1890.

Moving an Apiary a Short Distance.

R. C. AIKIN.

A question often asked is: "Can I Move an Apiary a Short Distance without loss." About Nov. 1, I moved an entire apiary of 80 colonies, a distance of about 400 feet. I was preparing to pack the bees for Winter, so I built the cases, or packing boxes on the new grounds.

When all was ready and the bees were all in, I stopped all entrances and at once proceeded to move them. I made a small sled by nailing boards on 2 pieces of 2x6 about 6 ft. long. One horse did the moving, taking 4 to 6 colonies per load. All hives were left closed until the whole were moved, the old yard cleaned up, and as thoroughly changed in appearance as circumstances would admit. I then proceeded to mark each hive. The hives were placed in the boxes, or clamps, ready to be packed for Winter, and so were in long rows and about 6 inches apart.

The marking was done as follows: I took scraps of board, odd sizes and shapes, and placed alighting boards in front of the hives, so that no two hives adjoining, should look alike. Pictures, colored papers, pieces of pasteboard, tin cans, etc., were tacked on the front of the hives in various positions, and pieces of boards and sticks leaned up in front for them to "bump their heads against." Now all were liberated, (this had best be done just near the close of the day when the flight will be short), and finding all completely changed they marked the place well before leaving for longer flight. Quite a few went back to the old location, but after flying about a few minutes, would return to the new place. I could not detect a particle of loss and they had no trouble in finding their hives.

Let me also give some experience in marking hives at

MATING TIME.

The past season I was handling 2 out-apiaries. They were run for honey alone, no increase being allowed and all queens removed during the honey flow. Most of the queens were killed and each colony allowed to rear one queen, and so re-queen the whole apiary.

One of the apiaries, 65 colonies. was located on open ground, with the hives in long rows and as close together as convenient to work between. Because of lack of time, this apiary did not have the hives properly marked so as to be easily recognized by the queens. The result was that between ¼ and ⅛ of them were lost in mating.

The other apiary, 60 colonies, had the hives placed in more varied positions, hives farther apart, little flags, boards, papers, etc., placed in front, besides having the advantage of some natural marking such as small trees.

In this apiary only 4 queens out of 60, were lost in mating.

This difference was due alone to the markings. Each had nice weather, clear, dry and warm, right in the midst of honey flow and only 4 to 5 days difference in time, and located about 2½ miles apart. It pays to mark well at mating time.

Holyoke, Colo., Dec. 25, 1890.

Honey Crop from White Clover.

A. H. DRAPER.

The main dependence for a crop of honey in the United States, with the exception of California, the Rocky Mountain States, and perhaps Wisconsin, is white clover.

Now, if the whole nature of this plant could be thoroughly understood, and I do not see any reason why it could not, it would be a great blessing to the fraternity. I believe the percentage of a white clover crop can be pretty closely estimated for the ensuing season, as early as January. I wrote to Mr. A. I. Root 3 or 4 years ago, my letter was published in *Gleanings* at the time, I think it was in the Fall of 1888, saying that the heavy Fall rains would enable white clover to spring up in abundance, so that we could expect a heavy honey flow the following Spring. In an essay, read at the Capital Bee-Keepers' Convention, held at Springfield, Ills., Sept. 26, 1890, I called attention to the same thing. (Published on page 700, of the BEE JOURNAL.)

We had just had two heavy rains, the last one on the morning of Sept. 26. This made an encouraging prospect for a white clover crop for next year. But from that time until Dec. 24, we had another *drouth.* So that at this date the prospect is not nearly as encouraging as it was on Sept. 26.

Now for the situation. I have examined all the white clover, within several miles of my home apiary. Generally the side hills and the high lands are almost bare of white clover, and blue grass seems to hold possession, but on the low ground in the valleys and hollows, and along the ditches, white clover is pretty well set. There is nothing like as much white clover within reach as there was last year, or the year before. At Springfield, and westward to Keokuk, there seems to have been less rain than there was here during September, October and November. Still the soil is different in that region, and I do not believe a drouth in July or August will affect the white clover yield of nectar the following season. But let the drouth be continued later in the season and the chances for a crop are very slim.

A good illustration is furnished by the corn crops. If a shower comes when the corn is beginning to set, it is almost sure to make a crop. This season, although corn is almost a failure in several States, there are many places where, on small areas, they got a few showers just in the nick of time to make good crops. Do not these showers affect the clover in the same way?

While on the train going to Keokuk to the International Convention, Dr. Mason and Mr. Root claimed that they had been having very wet weather for a month or more, in Ohio and all over the Eastern States. This being the case, if my theory is correct, Ohio and the Eastern States can confidently expect a heavy crop of white clover honey during 1891.

White clover needs a great deal of moisture to develop it properly. The drouth here was excessive during July and August. On the grazing land the stock had consumed every particle of grass and clover, but the rains, during September, started both grass and clover with new life, which was followed by another severe drouth during October, November and December. The stock were so eager for green stuff, that they ate the clover and grass down to the roots. There is no doubt but that the range here will yield less clover honey than last year or the year before.

What shall I do so as not to lose the use of my hives and bees? Simply this, start more out-apiaries and keep fewer bees in a place; probably 40 colonies will be as much as any one location will support on white clover, in this vicinity, next season. Afterward, I would mass them on the Spanish-needle level, during July and August.

No subject connected with bee-culture, has been so little ventilated, as the conditions necessary to produce a crop of nectar, not only the condition of the weather during bloom, but from seed-time until harvest. I was glad to see this theory adopted by Professor Cook at the International convention. For the benefit of Dr. Miller and others, I wish to show the advantages to be derived from a thorough understanding of this subject.

A farmer has a crop of wheat ripe and ready to cut. If he understands his business he knows how much twine to get to tie it up; how many men to get to stack it; how much help he needs to thresh it, etc., etc.

If we understand the conditions that lead up to a honey crop, we may know how many sections to provide, how much foundation to get, what other supplies we will need, and to what apiaries to take our supplies. I will quote from Langstroth, (Revised by Dadant, page 303, article 582.)

"In many years practice in keeping bees in 5 or 6 different apiaries, I have found out that the crop will vary greatly in a few miles, owing to the different flora of the various localities, and more especially to the greater or less amount of rain-fall at the proper time."

J. M. Hambaugh, of Spring, Ills., harvested altogether different yields, both in quality and quantity, from two apiaries only 2½ miles apart. Does this not prove conclusively that, to secure the best results, the bees must be properly located? Also, that a location only 2 or 3 miles distant from each other, may be able to support twice the number of bees profitably that the home-apiary would. If we must wait to find this out by actual test, by the time we determine to take advantage of the extra yield, the crop will be over.

So that the position Dr. Miller takes is altogether untenable (page 777, Bee Journal). "That it makes but little difference in the practical results whether this theory be true or not."

If the bee-keepers in different parts of the country would report the condition of white clover in their locality, say on Sept. 1, Nov. 1, and Feb. 1, and then, what their yield is in June, as well as the conditions of the atmosphere and the clover plants, we could soon thoroughly understand this subject.

Upper Alton, Ills.

Past and Future Apicultural Journalism.

THOMAS G. NEWMAN.

This subject has been assigned to me for some suggestions. As my available time is very limited, I shall be brief, leaving it to you for discussion and amplification.

THE PAST.

Apicultural journalism was called into being in America, just 30 years ago to-day, when the lamented Samuel Wagner issued the first number of the American Bee Journal. Its birth occurred then, because it was a necessity—it was *demanded* by the existing state of apicultural progress.

The movable-frame hive had been invented, the mysteries of bee-economy had been manifested, rational bee-management had been inaugurated, the improved races of bees had been imported, and a medium of communication between those engaged in the business of importing and selling bees, of manufacturing and vending hives, and of producing and disposing of honey, was a "want" which could no longer be left "unfilled!"

THE PRESENT.

From one small monthly of 24 pages, American apicultural journalism has now grown to something like a dozen monthlies and one weekly. Meanwhile, over 50 more have existed for a brief time and passed away, and now even their names have been almost forgotten. Samples of about that number are now preserved in my library, to show what "might have been!" Those surviving are exerting a wonderful influence to-day in apicultural progress.

THE FUTURE.

That is quite speculative. Apicultural journalism will in the future be just what bee-keepers themselves make it. If they liberally support the best exponents of the vocation, if they generously patronize those which give tone and influence to the pursuit—then we have no fears for the future.

The editors of the future will doubtless *lead* the fraternity on to brighter achievements, and greater inventions, which will surpass the present and eclipse the past! Like brave generals, they will *lead*, when storming the citadel of the undiscovered future; and, taking the grand inventions from their hiding place, will hold them up to the astonishment and admiration of the World!

POINTS FOR DISCUSSION.

In what direction may we reasonably look for "the next progressive step?" Can any one present give us a "pointer?"

How may we best encourage such inventions? How can we hasten and allure the revolutionizing discoveries of the immediate future?

In what better way can we invite improvements, and assist in making them known, than to encourage and support bee-periodicals, and help to widen their influence and power of doing good?

Apicultural journals have created a sentiment in favor of defending the rights of bee-keepers. Their influence brought the National Bee-Keepers' Union into existence. Is it not our duty to uphold that helpful organization in every possible way—thus faithfully serving our age and generation, and at the same time proving ourselves worthy to form a part of the onward, sweeping tide of destiny? We must help to make the progressive future gloriously excel both the past and the present.

A thorough discussion of these important questions is invited.—*Read at the Michigan State Convention.*

To Connecticut Apiarists.

EDWARD S. ANDRUS.

I began in the Spring with 2 colonies of black bees, and I bought 2 Italian colonies which have increased to 10. I have re-queened all poor stock with good queens. I took about 12 pounds of honey, and believe the bees to be in good condition for the Winter. Why do we not hold bee conventions here in our busy little State? I believe there are bee-keepers enough in the State to make quite a respectable gathering. We are a long way behind our western brothers, and are depending too much upon them for our own good. I, for one, would be glad to be a member of such an organization. What do brother bee-keepers say about organizing?

Tarrington, Conn.

CONVENTION DIRECTORY.

Time and place of meeting.

1891.
Jan. 28.—Vermont State, at Middlebury, Vt.
J. H. Larrabee, Sec., Larrabee's Point, Vt.

Feb. 10, 11.—Ohio State, at Toledo, O.
Miss Dema Bennett, Sec., Bedford, O.

Feb. 11, 12.—Eastern Iowa, at Maquoketa, Iowa.
Frank Coverdale, Sec., Welton, Iowa.

May 7.—Susquehanna County, at Montrose, Pa.
H. M. Seeley, Sec., Harford, Pa.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

North American Bee-Keepers' Association

PRESIDENT—P. H. Elwood....Starkville, N. Y.
SECRETARY—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

PRESIDENT—James Heddon ..Dowagiac, Mich.
SEC'Y AND MANAGER—T. G. Newman, Chicago.

Bee and Honey Gossip.

Bees Doing Well.

I have just returned from a short eastern trip, and found my bees, and those of the neighborhood in general, in good condition. The demand for bees is greatly on the increase, and prospects are once again looking brighter. Allow me to congratulate you on the improved appearance of the BEE JOURNAL.

W. M. BARNUM.
Indianapolis, Ind., Jan. 8. 1891.

The Drouth of Last Summer.

The weather is very fine here. Bees are having good flights. My bees are packed on the summer stands in dry forest leaves, and are wintering good so far. I extracted 60 gallons from 12 colonies, and have most of it on hand yet, it is all candied solid. I am well enough satisfied considering the drouth.

W. H. MARTIN.
Elkhorn, Neb., Jan. 5, 1891.

Bees in Manitoba.

I have seen reports from all parts of the United States and Canada in the AMERICAN BEE JOURNAL, but have seen none from Manitoba where the mercury gets as low as 50° below zero in mid-Winter. In the Spring of 1889 I bought 3 colonies of bees from C. Theilmann, of Minnesota, from which I extracted 250 pounds of honey, and the number of colonies increased to 11. I lost 2 colonies last Winter through dampness and 3 more from Spring dwindling, which left me 6 colonies. The season was very poor here, we had too much rain in the honey season and the Spring was very backward. We had actually no warm weather until June. I put 10 colonies in Winter quarters on Nov. 10, and expect to leave them there until the latter part of April. C. J. WINKLER.

Treherne, Manitoba, Dec. 29, 1890.

Failure of Crop.

The honey crop in this locality was an entire failure, and most of the bees, that were not fed, will starve before they can obtain a living in the Spring. The Winter thus far has been exceedingly fine, with no snow to speak of. After seeing a copy of the Illustrated Home Journal, I wondered how any home could be without it. WM. ENKE.

Rochester, Minn., Jan. 6, 1891.

A $2,500 Fire.

My shop and all the machinery, together with all my bee-fixings, were destroyed by fire last July. I had no insurance. It even burned my gold watch, coat, etc., but I have 170 colonies of bees left, and must have the AMERICAN BEE JOURNAL. It looked hard to see it all go ($2,500 worth) but like "Josh" I don't cry for spilt milk, but grab up the pail and go for the next cow. I like the new form of the BEE JOURNAL. It is more like a book and takes up less room.

D. G. WEBSTER.

Blaine, Ills., Jan 12, 1891.

Weighing Bees.

Our bees, 93 colonies, are very quiet in the cellar, the same number as we wintered one year ago. We only secured a half-ton of honey. We weighed our bees the last of September and they weighed from 40 to 60 pounds. We weighed them again in a month, and were surprised to find them turn the scales at the same weight they did a month before. Was it Hibernation? We think darkness, dryness and dormancy are the 3 requisites for cellar wintering, with a temperature from 42 to 44°. The hives should be covered with something porous.

J. A. PEARCE.

Grand Rapids, Mich.

Fears Loss this Winter.

Our Fall and Winter so far has been very dry and mild, until last night, when it rained, and to-day it is snowing. Bees that have plenty of honey I think are doing finely, but I think there will be a heavy loss this Winter. Some have already lost a good deal by starvation. I doubled up a good many of mine. I put 31 colonies in the cellar on Dec. 24, and I think they are doing well.

SAMUEL FLORY.

South English, Iowa, Jan. 1. 1891.

Summer Weather Yet.

It was very dry here last Summer, so I will not have to give a long report of my surplus honey crop, though I have some honey for sale. My bees are on the summer stands yet, with stores enough to take them through the Winter. The weather is very mild so far this Winter. I have 35 colonies.

LIONEL BROKAW.

Summer Hill, Ills., Jan. 1, 1891.

Bees are Wintering Nicely.

All are very quiet in the cellar with the thermometer ranging from 45° to 48°. I raised the hives off the bottom board about ¼ inch, which gives plenty of ventilation. I have left a few hives outside to try the experiment of seeing which will winter best. I have about 135 colonies in my cellar. I attended the convention at Rockford, where I met many kind friends and new acquaintances, and where we discussed many bee topics as best we could. Take it as a whole, I can say we had a very pleasant time, and I thought it very profitable.

A. Y. BALDWIN.

DeKalb, Ills.

Wintering on Uncapped Stores.

My 22 colonies, put into Winter quarters in the Fall of 1889, came through without loss. Every one was strong. The first of June found them all full of bees, many of the queens laying, just on the point of swarming, as I supposed. Instead of receiving swarms, I noticed most of the colonies were killing their drones. The weather during fruit-bloom was wet and cool, so that it prevented the bees from working. The result was but few swarms and but little fruit, in this locality. I have the very general report to make, "Honey crop a failure, and we had to resort to feeding." I watched with hope until I found goldenrod was going to fail. This brought feeding late, so that cold weather found much of the stores uncapped. My case will afford an experiment of wintering, or trying to winter, on uncapped stores of sugar-syrup, and I shall studiously watch the result. My bees appear to be in good condition now. I would like to see an article from some one on "the proper treatment of bees, when found killing their drones the first of June."

J. P. Smith.

Sunapee, N. H., Dec. 29, 1890.

Well Supplied for Winter.

I have 29 colonies of bees in new Heddon hives all in good condition, as far as food is concerned. I am nearly 78 years of age, with health rather poor and I think it is rather too much for me to give them the necessary attention another season. So far, in my experience, I have done well, in securing honey.

T. J. Bates.

White Hall, Ills., Jan. 3, 1891.

Not Discouraged.

The past season has been the poorest for bees in this section, that I have ever known. No swarming, no honey, and consequently no money, and were it not for the weekly visits of the Bee Journal to wake new thoughts and cause new efforts, I would have but little or no ambition to try to do anything with bees. With nearly 100 colonies in fairly good condition in early Spring, I arranged my plans for a big crop of honey. Alas! for my expectations. The cold rains of Spring and Summer, soon washed them all away. I am much pleased with the new dress of the Bee Journal. Enthusiasm is catching, and so as I read the reports weekly of other bee-keepers, I feel like gathering up my strength for a stronger pull. The Bee Journal has paid me well for all it costs.

V. N. Forbes.

West Haven, Vermont.

Generous Endorsement.

I unqualifiedly endorse the Home Journal, as one of the best "Home Journals" I have seen. Not only its typographical appearance, but in every respect, morally and otherwise. In fact it fills a place that others have attempted, but have failed in, by reason of introducing politics or some form of sectarianism or other. To the scientist, it may not be of much value. To the religionist, it may not present the creeds he endorses, but to the lover of home, and to those who desire to place nothing in the home that can in any wise be considered harmful, it appeals in every page. One cannot expect for the price of the subscription a dissertation in every number on every topic of interest, but the magazine gives a chance for every one to put in their homes a clean paper that will amuse, benefit, and instruct.

J. E. Pond.

North Attleboro, Mass.

Bees Pay Better than Anything Else.

My bees have done very well considering the care they have had. I never have had anything pay better. I had last Spring 31 colonies. I divided 2 and got 9. My bees did not swarm much and I waited until they were all full of honey before I commenced to extract it. I got 3,500 pounds of honey, which finds a ready market in Colorado. I leave my bees on Summer stands, partially closing the entrance, is all I do with them.

E. W. Warner.

Moab, Utah, Dec. 29, 1890.

Failure of Honey Crop.

I went through my bee-cellar to-day and found my bees all in good condition. Fifty colonies of mine could do nothing last Summer. I keep them going with granulated sugar, and will hold up my grit for another season. I see in the Bee Journal that the State of Minnesota was a failure, last year, in the bee business. "If you don't at first succeed, try, try, try again."

I see on the list of the Union for 1890, that there are 373 members. And again, I see that there are several lawsuits started and I am glad to hear it. Now let us see what the Union can do. I will send my dollar, dues for the year of 1890, and if you run short I will put in more hereafter.

Fred Bott.

Wabasha, Minn., Jan. 4, 1891.

Bees Wintering Well.

Bees have done very poorly the past season. I got about 150 pounds of comb-honey from 60 colonies, Spring count. Increased them to 89 colonies which are wintering all right so far, and I think the prospect is good for a nice crop next season.

D. Kauffman.

Neediz, Ore.

Experience is Encouraging.

I do not know whether it is your mistake or mine, but my letter of Dec. 15, should read two hundred dollars worth of honey instead of two hundred pounds. I got plenty of honey from the lower part of the old hives, and would rather have the surplus in sections above, but I do not know how to get it there. My experience has been very encouraging instead of otherwise. I should be very much obliged if the mistake could be corrected. E. COOKE.

Cataraqui, Ont., Jan. 7, 1891.

◆

Took the County Prize.

The honey crop last season was not very good in this locality. The honey flow from white clover lasted only about 12 days. I had some Fall honey. I had 7 colonies Spring count, increased to 9 and took 415 pounds comb-honey in 1-pound sections. I was awarded the premium on honey at our County Fair. My bees are in good condition at this time, and I presume will come out all right in the Spring. The prospect for white clover is good. A. F. SANGER.

Pilot Grove Mo,, Jan 15, 1891.

◆

A Few Buzzings from Iowa.

In the Spring of 1890 I commenced with 115 colonies of bees and *very* high hopes. Everything looked very encouraging for a good season, but, as Spring passed and Summer merged into Autumn, it became apparent that my hopes were again to be blasted. I wonder how many have laid plans, based on the future honey-crop, only to have them vanish like an air bubble.

At the close of the season I had 124 colonies, with just about honey enough to carry them till Spring, *not a pound of surplus*. I have 34 colonies in the cellar and the balance in chaff-hives, and thus far they are wintering very nicely.

At the present writing we have had no winter, only an occasional *sharp* morning, so that the bees could not die unless they died from spite.

Some of the great lights tell us that bee-keepers, as a rule, are a happy-jolly-contented class of people. I think all that are left must be, for 3 failures out of 4 seasons, has been enough to drive all the "rolling stones" from our ranks.

Now that there is a good prospect that bees will Winter well, I would say to all beginners; do not get wild about it; do not go in debt on the strength of a large honey-crop, but hold yourselves level.

If we (we means *every* bee-keeper) get a good crop of honey this season we ought to get a good price for it. The markets are nearly bare of honey, so let us be careful about slaughtering prices, for this is one of the worst evils connected with our pursuit. In the BEE JOURNAL Jan. 8, James Heddon says: "Our success demands plenty of bees, good crops and low prices," I would ask what do you call "low prices?" Let us beware of encouraging these low prices. Prices go *down* easier than they go up, and are higher when honey is scarce.

In the Fall of 1889, comb-honey retailed at 15 cents per pound, and last Fall at 25 cents per pound.

If we were sure of a good crop *every* year, we could stand the "low prices," but as we are not, let us try and make it average up. H. L. ROUSE.

New Hampton, Iowa.

◆

More Convenient.

The AMERICAN BEE JOURNAL is to be congratulated on its new dress and improved appearance. It is much more convenient for binding and reference. Every bee-keeper should read it.

FRANK COVERDALE.

Welton, Iowa.

◆

Holding Closed-End Frames Together.

With reference to holding closed-end frames together, mentioned by Rev. W. P. Taylor, on page 57, I would say: For holding the frames together I have nothing better than a strong cord; I make a loop in one end, put it around the brood-nest, pass the end through the loop, draw up taught, and take a half-hitch. This can be unfastened instantly. It is the invention of the late M. Quinby, and is used by all who use the standing frame, on the Quinby plan. Those who are interested in standing frames, should read Quinby's new Bee-Keeping, it explains the whole system.

IRWIN GROVER.

Cooperstown, N. Y.

◆

Winter Losses Estimated.

The ground has been covered with snow since the cold weather began. We have had no extreme cold weather yet, but just cold enough to hold the snow—very favorable for wintering bees so far, also for clover. Bees went into Winter quarters in this vicinity very light in stores and young bees. But few bees matured in September, and less than is usual with us in October. Light stores and too many old bees, will "wipe out" about 50 per cent. of the colonies in these parts before fruit bloom. The average yield the past season was about ¼ crop of honey with about 25 per cent. increase. People are neglecting their bees very much on account of several poor seasons in succession. I have 113 colonies in fair condition in the cellar and am feeding more than ever before.

G. N. Ashby.

Albion, N. Y., Jan., 1891.

Very Poor Results.

Our bees did very poorly last season both in honey and increase. Seventy-two colonies, Spring count, gave us only 200 pounds of comb-honey, 500 pounds of extracted-honey, 15 swarms, 200 unfinished sections and 200 pounds in frames for feeding next Spring. We put the bees in the cellar on Dec. 24, when they were in fair condition. They are very quiet, at a temperature of 45°.

We like the improvement you have made in the Bee Journal very much.

S. J. Church & Son.

Cedar Rapids, Iowa, Jan. 6, 1891.

Gathering from Cat Willow.

I expect to establish a few more out-apiaries, as I now think they will pay well enough in this State. There are very few bee-keepers around here. Last Spring I moved my bees to Wood Ridge, N. J., as the country about that place is partly meadow, and has plenty of cat willow. The bees are gathering large quantities of pollen from the willow, which blooms in March. It seems that in June the country about Wood Ridge is not suited for bees, so I will have to take them to a better place. It seems odd to me that my bees in the city, at my residence, have gathered more honey than those in the out-apiaries. I believe it is mostly white clover honey.

John Blanken.

Jersey City, N. J., Jan. 11, 1891.

Bees in Good Condition.

I have 180 colonies of bees in Winter quarters. I obtained but little surplus honey last year, but my bees never went into Winter quarters in better condition. If there is a good flow next season I shall be ready for it.

H. B. Visson.

Ottumwa, Iowa, Jan. 8, 1891.

Satisfactory Honey Crop.

I started last Spring with 15 colonies, they increased to 23, and I have extracted 1,200 pounds of honey. I use Langstroth hives and work entirely for extracted honey. Not being accustomed to handle bees, at the beginning of the clover bloom I moved up a frame of brood to keep them from swarming. If there is any other way to prevent swarming without getting brood in the upper story, I would like to know it.

Benjamin Townsend.

Lyndhurst, Ont., Jan. 12, 1891.

Italianizing an Apiary.

I have an apiary of 40 colonies of bees, which I wish to Italianize the coming season. As I have but little practical knowledge in that branch of bee-keeping, will friend Doolittle, Heddon, Dr. Miller, Demaree, or some one else tell me through the American Bee Journal, the easiest, most simple and least expensive way, and the best time in the season to do this. Do not refer me to books or back numbers of the Journal. I want something fresh and to the point, and so plain that "though a fool I may not err therein." It may also be of benefit to other readers.

A. J. Duncan.

Hartford, Iowa, Jan. 12, 1891.

Carniolan Bees are Best.

I have not done very well for 3 years past. It was too dry for the bees to do well here last Summer and I had to feed them until the Fall rains came. After that they did pretty well until we had the first frost in October. What little honey I did get was very nice. The basswood did not keep in bloom more than 5 days last year. My bees are about 3 miles from it, and if I do not have my colonies all strong at the time, they do not get very much benefit from it. I see by the Bee Journal that some bee-keepers find fault with the Carniolan Bees, I have had them for 6 years and can say that I have found them just as Frank Benton recommended them. I have always got my queens from the most responsible breeders in the United States, and have always found them to be far superior to any other breed I have tried for this part of Nebraska. I also got these queens for ten of my neighbors and have not heard anything but that they were all well pleased with them. The reason I prefer this breed is that they winter better in cellars than the other bees, come out stronger and there is no Spring dwindling. I have seen them build up faster on the apple bloom and they will go out on cold days in the Spring when other bees will do nothing. When they come to swarm they are not as bad as the Palestine Bee but about the same as the Italian and when they cap their honey, it is finished up nicely and white as snow. As to gentleness, they have no superior if they are purely bred. I produce nothing but comb-honey and these bees answer my purpose. There is another thing about quiet bees. If you wish to sell a farmer a colony of bees, the first thing he will say will be about the stinging points of them, and when you tell him they have been improved, just like other kinds of stock, he will not believe you until you take him into your apiary and show him the difference; then you may sell him a colony. If it were not for the cross-breeds of bees, there would be no trouble to sell bees to farmers, if they were Carniolans or Italians. About 8 years ago we used to get our bee hives by the car-load, but of late years we are not using so many. Some of the bee-keepers would not read a bee journal if I would give it to them, and I give lots of them away, to keep them on the right road to prosperity. JAMES JARDINE.

Ashland, Nebr.

Bee-Culture in Washington.

I am receiving a number of letters from subscribers to the BEE JOURNAL, asking for information about the State of Washington, but many of them have the address so illegibly written that I do not know where to send my answers. Please ask them through the BEE JOURNAL, to write their addresses more plainly. I am not in the real estate business, but if they will write their address plainly and enclose a 2-cent stamp for return postage, I will give them what information I can and send them Seattle papers. JOHN BOESTLER.

Vashon, Wash., Jan. 10, 1891.

Satisfied with the Increase.

I commenced the Spring of 1890 with 28 colonies of bees, increased to 34, and got about 700 pounds of extracted-honey. Bees in this neighborhood have gone into Winter quarters, the colonies rather weak in bees and short in honey. A good many new colonies have died already, and many more will starve before Spring. FRED BECHLY.

Searsboro, Iowa, Jan 16, 1891.

Ventilation for Bee-Cellars.

My bees were put in the cellar on the evening of Dec. 1. They have been unusually quiet ever since, and there are very few dead ones on the floor. The temperature is almost constantly at 45° Fahr. The Winter is very mild, and although the mercury was 2 or 3 times as low as 25° above zero, it went up also to 55°. There is not much snow on the ground. Last Fall I put in a sub-earth ventilator made of 6-inch tiles, and 25 feet long. It enters the bee-cellar on the east side, just a little below the floor. This and a pipe in the chimney keeps the air sweet and pure.

L. HAMMERSCHMIDT.

Amana, Iowa, Jan. 9, 1891.

Bees of Great Benefit to Fruit.

My honey crop, for the season ended, did not come up to my expectations by any means. I was looking forward to a crop of 1,000 pounds. Everything was flattering until July when the drouth came on. and that ended the matter. I got 100 pounds of very fine raspberry honey, which I sold for 25 cents per pound—the standard price for first-class honey. I had many orders, from customers, for such goods but was unable to fill them. My bees in early Spring seemed slow to increase in strength, and I did not put the sections on until after cherry and apple bloom were over. This, I think, was a mistake, as a friend of mine then had his surplus on, and secured a fine lot of both kinds. I commenced the season with 9 colonies and increased only 2, and during the Fall, I lost 2. Last Fall I introduced 5 Syrian queens, 3 of which met an untimely death and I have been sorry I did not get Italians instead. During the Summer my bees turned so cross that I could scarcely work with them. During the Fall the bees had quite a run on buckwheat which kept them in good working order. I had to feed them for Winter stores, and I am afraid I will lose a part of them this Winter. I have them packed with forest leaves, and under a roof. I feel like giving up the bee business sometimes, and yet I do not want to be without them, as I am cultivating strawberries and raspberries, besides having an apple and peach orchard, and I think, yes, believe, that they are of immense benefit to me, even if I do not get very much honey. I could do better by extracting; that is I could get more pounds of honey, but I have some trouble in selling it, as nearly all prefer to pay the difference, and besides that they imagine that the extracted-honey is mostly made of sugar. Bee-keepers in this neighborhood take little interest in bees and they are left to take care of themselves the best they can, and the result often proves disastrous. Those who do keep bees for profit, take one or more journals. Very little encouragement is given to bee-keepers by our Apicultural and Horticultural society of Berks County. The premiums are so small that only two or three persons exhibit, and then only in small quantities. Berks County should have an association for bee-keepers. Many are in favor of the scheme but it seems to all end in talk.

EVAN R. STYER.
Morgantown, Pa., Jan. 13, 1891.

Bee-Culture in Kansas.

In 1887 I commenced with 2 colonies of bees, one was so weak that it starved, and the other was stolen. Determined not to be beaten, the next Spring I bought 23 colonies, all of them being small. I was obliged to transfer them, and in so doing I lost 2 colonies and there being 2 queenless ones, it left me but 19. I have now 24 colonies all in good condition. From 9 colonies I took 80 pounds of comb and 12 pounds of extracted honey per colony; and, from 11 colonies, I took 12 pounds of extracted-honey per colony. We had a very poor season on account of the drouth. Our Winters are very mild and this Winter the bees have been flying every few days, the mercury ranging from 50° down to 15° above zero, the average being about 40°. I winter my bees on their Summer stands in single walled hives, and have had no loss or Spring dwindling. We have a good market for honey, I sold my comb-honey for 15 cents per pound and extracted for 12½ cents per pound.

L. WAYMAN.
Chanute, Kansas, Jan. 7, 1891.

Strange Freak of Nature.

In the Fall of 1888, there was growing on a vacant lot adjoining my residence, a lot of golden rod and some white and pink flowers, the name of which I did not know, but which appeared to be a honey plant. They were in full bloom and literally covered with what looked like bees, but on catching some, I found them to be flies. On the wing and also on the flower, they looked exactly like a bee, but when caught and examined they proved to be lighter in color, the abdomen was flat and on the under side they looked like a lightning bug. I had a good joke on passers-by, telling them that I had my bees mixed with lightning bugs, so that they could work at night. I caught some and upon dissecting them, I found they had a honey sack which was full of honey. They made a noise like the bee only louder and in a lower key, and it was hard to distinguish them from the bees, which they outnumbered 5 to 1, until they were caught. They were never noticed here before or since.

J. E. PRICHARD.
Port Norris, N. J., Jan. 13, 1891.

[You should have sent some samples of them to Prof. Cook. He is always pleased to receive such.—ED.]

Bee-Keeping in Northern Nebraska.

As a general thing the bees here have gathered enough honey to Winter on. Doctor Porter, who lost so many colonies last Winter, has been dividing them up. He had 15 colonies left in the Spring and I hear that he divided them until he had over 60. He used the combs and honey left by the colonies which died. Another man had a few late colonies but as they did not gather enough honey to winter on, he thought it would not pay to feed them. Bee-keepers here say that their bees will winter on the stores they have gathered, but they have no surplus honey. One man started last Spring with 2 colonies, he had 3 swarms but 2 of them went together, so that he only doubled his number. Another, who had a large increase in 1889, had a very small one last season, and no surplus honey. It is the same all over this country, small increase and very little surplus honey. I weighed my hives when I put my bees into the cellar and put honey into the 3 lightest ones, together with some sugar syrup, and I intend to try and keep these colonies alive. I have 60 or 70 pounds of surplus honey.

IRA N. LYMAN.
St. Peter, Iowa, Jan. 9, 1891.

A Word of commendation from our readers to those not among our subscribers, will be more potent than anything we can say. If you like our JOURNAL—please let your neighbor know it, and let us thank you in advance for this favor.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

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ALFRED H. NEWMAN,
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☞ Subscribers who do not receive their papers promptly, should notify us at once.

☞ Send us *one new* subscription, with $1.00, and we will present you with a nice Pocket Dictionary.

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☞ Systematic work in the Apiary will pay. Use the Apiary Register. Its cost is trifling. Prices:

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 25
" 200 colonies (420 pages)	1 50

☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

Our Sewing Machine.—One who has purchased a Sewing Machine of us, as advertised on page 382, volunteers this statement:

> I am well pleased with the Sewing Machine you sent me; any persons wanting a good Sewing Machine, one that is equal to the high-priced machines which are sold by agents, can do no better than to send for your $15.00 Machine. They will be agreeably surprised when they see it. Mine is really better than I expected.
> W. J. PATTERSON.
> Sullivan, Ills., Dec. 5, 1890.

The "Farm-Poultry" is a 20-page monthly, published in Boston, at 50 cents per year. It is issued with a colored cover and is finely illustrated throughout.

We have arranged to club the AMERICAN BEE JOURNAL with the *Farm-Poultry* at $1.35 per year for the two. Or with the ILLUSTRATED HOME JOURNAL at $1.75.

Look Over the numbers of 1890, and if any are missing, send for them at once—before all are gone.

Only a Few complete volumes for 1890 are on hand. If any one desires to have a full set of numbers for binding, they should be sent for soon.

Reader, the BEE JOURNAL is working for your interest every day in the year, and now you are respectfully invited to work for its interest, by devoting a few hours to get a *new* subscriber for it, and thus help to make it still more valuable and useful to the pursuit.

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Catarrh, Catarrhal Deafness, Hay-Fever—A new home treatment whereby the worst cases of these hitherto incurable diseases are permanently cured by a few simple applications made once in two weeks by the patient at home. A circular describing the new treatment is sent to any applicant free on receipt of stamp to pay postage by A. H. Dixon & Son, sole proprietors, 345 West King Street, Toronto, Canada. 49A 12Mtf

HONEY AND BEESWAX MARKET.

DETROIT, Jan. 17.—Comb Honey is quoted at 15@17c. White Clover quite scarce. Extracted, 7@8c. Beeswax, 26@27c.
M. H. HUNT, Bell Branch, Mich.

NEW YORK, Jan. 17.—Market is very quiet, especially on comb honey. We quote: Fancy white 1-lbs., 15@16c; 2-lbs., 13@14c; off-grades, 1-lbs., 13@14c; 2-lbs., 12c; buckwheat, 1-lbs., 11@12c; 2-lbs., 10c. Extracted, basswood and white clover, 8@8½c; buckwheat, 6½@7c; California, 6¾@7¼c; Southern, 65@70c per gallon. Beeswax, 25@27c.
HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

KANSAS CITY, Jan. 17.—Honey is very slow sale, both comb and extracted. We quote white 1-lb. comb, 16@18c; dark, 12@13c; white, 2-lb., 14@15c; dark, 11@12c; extracted, 6@7c. Beeswax, 25c.
CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CINCINNATI, Jan. 18.—Demand is good for all kinds of extracted honey, with a full supply on the market of all but Southern, which is scarce. It brings 6@8c per pound. Demand is fair for choice comb honey, which which we hold at 16@20c, in the jobbing way.

Beeswax is in good demand at 24@26c., for good to choice yellow. C. F. MUTH & SON,
Corner Freeman & Central Aves.

CHICAGO, Jan. 17.—Demand at present not very active on comb honey. Fancy white, 18c; white, 17c; white 2-lb. sections, 15c; buckwheat, 1-lb. sections, 13c; extracted, 7@9c. Beeswax, 28c.
S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, Jan. 18.—Fancy white 1-lb. comb, 18c; fair to good, 17c; dark 1-lb., 14@15c; 2-lb. white comb, 15@16c; 2-lb. dark, 13@14c; extracted, white, 7c; dark, 5@6c.
HAMBLIN & BEARSS, 514 Walnut St.

CHICAGO, Jan. 19.—There is not the volume of trade usual at this season, yet prices are without material change since last quotations. Best lots of white honey in 1-pound sections, brings 17@18c; brown and dark, slow, at uncertain prices. Extracted, 7@8c per pound. Our stock is light, as to quantity, but is kept well up to demand by daily receipts. Beeswax, 27@28c.
R. A. BURNETT, 161 S. Water St.

DENVER, COLO., Jan. 16.—First grade 1-lb. sections, 16@18c. Supply exceeds the demand at present. Beeswax, 25@28c.
J. M. CLARK COM. CO., 1517 Blake St.

BOSTON, Jan. 9.—While honey is selling slowly, prices are being well maintained, and the supply will be entirely exhausted before the first day of March. Best 1-lb. comb-honey is selling at 19@20c; fair to good, 18@19c. There are no 2-lb.sections on hand. Extracted, 7½@9c. There is no beeswax on hand.
BLAKE & RIPLEY, 57 Chatham Street.

ALBANY, N.Y., Jan. 17, 1890.—The honey market is quiet and steady, with light stocks of any kind or grade. We are selling white at 15@18c; mixed, 14@15c; dark, 12@14c. Extracted, white, 9@10c; mixed, 6@8c; dark, 6@7c.
H. R. WRIGHT, 326-328 Broadway.

A Nice Pocket Dictionary will be given as a premium for only **one new** subscriber to this JOURNAL, with $1.00. It is a splendid little Dictionary—just right for the pocket. Price, **25 cents.**

CLUBBING LIST.

We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

	Price of both.	*Club.*
The American Bee Journal	$1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Guide	1 50	1 40
Bee-Keepers' Review	2 00	1 75
The Apiculturist	1 75	1 65
Bee-Keepers' Advance	1 50	1 40
Canadian Bee Journal	2 00	1 80
American Bee-Keeper	1 50	1 40
The 8 above-named papers	5 75	5 00
and Langstroth Revised (Dadant)	3 00	2 75
Cook's Manual (1887 edition)	2 25	2 00
Quinby's New Bee-Keeping	2 50	2 25
Doolittle on Queen-Rearing	2 00	1 75
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 60	1 50
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	2 20
Western World Guide	1 50	1 30
Heddon's book, "Success,"	1 50	1 40
A Year Among the Bees	1 50	1 35
Convention Hand-Book	1 50	1 30
Weekly Inter-Ocean	2 00	1 75
Toronto Globe (weekly)	2 00	1 70
History of National Society	1 50	1 25
American Poultry Journal	2 25	1 50
The Lever (Temperance)	2 00	1 75
Orange Judd Farmer	2 00	1 65
Farm, Field and Stockman	2 00	1 65
Prairie Farmer	2 00	1 65
Illustrated Home Journal	1 50	1 35
American Garden	2 50	2 00
Rural New Yorker	2 50	2 00

Do not send to us for sample copies of any other papers. Send for such to the publishers of the papers you want.

We send both the Home Journal and Bee Journal for 1891, for $1.35.

Binders made especially for the BEE JOURNAL for 1891 are now ready for delivery, at 50 cents each, including postage. Be sure to use a Binder to keep your numbers of 1890 for reference. Binders for 1890 only cost 60 cents, and it will pay you to use them, if you do not get the volumes otherwise bound.

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THE AMERICAN BEE JOURNAL
CIRCULATES
ALL OVER THE WORLD.
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVII. Jan. 29, 1891. No. 5.

Editorial Buzzings.

Trade-Mark or no trade-mark. That is the question. Opinions are divided.

While the Weather in North America is unusually mild, Europe is having the coldest Winter for many years. All over the Continent the suffering is intense. The people are totally unprepared for such an extraordinary and unexpected change.

☞ Has the "Advance," heretofore published at Mechanic Falls, Maine, ceased to exist? We have not had a number for months. Brother J. B. Mason should tell us why.

The Bee-World.—No. 1 of this new monthly is on our desk. It contains 16 pages, and is published by W. S. Vandruff, Waynesburg, Pa. This should have been noticed before, but was mislaid. It is nicely printed, well edited, and has our best wishes for success.

It is Quite possible that Mr. G. H. Knickerbocker, the efficient Secretary of the New York State Bee-Keepers' Association, was not able to attend the annual Convention, held in Albany last week, on account of his wife's illness. She has an attack of typhoid fever, and is reported to be in a critical condition.

☞ The Rev. Stephen Roese, of Maiden Rock, Wis., writes thus: "The American Bee Journal came duly, in its new dress, and is a credit to its editor, who has labored for 17 years to made it such a valuable periodical. It has made its 30th birthday memorable indeed. It well deserves its rank of not only being the oldest, but the most thoroughly practical bee-periodical in America."

Killed Himself.—Mr. Zimri Presnall, of Nevada, Iowa, a harness maker and bee-keeper, was found dead in his shop on the morning of Jan. 22. It is a supposed suicide, by shooting. He leaves a wife end three little girls. So writes T. W. Blackman.

Five new bee-periodicals have been launched upon the sea of literature since New Year's Day. It must have taken considerable "enthusiasm," in the publishers, to do this, after the failure of the honey crop last year. There are more now than are well-supported. It may be that before another year rolls around disgust will take the place of enthusiasm, and "experience" will be the result of an empty pocket-book. While we wish them prosperity, we cannot approve of their judgment in selecting such an *inauspicious time* for embarking on the already-crowded sea of apicultural literature. But time will tell.

☞ The Indiana State Bee-Keepers' Convention was held at Indianapolis on Jan. 16, 1891. The report has not yet come to hand, but we expect it every day. When it comes, we will present it to our readers.

Illinois State Society.

Since our last issue, we have received the following letters on this subject, to which we invite the attention of the bee-keepers of this State:

In the *Prairie Farmer*, on page 27, I have something to say with reference to a State Bee-Keepers' Society for Illinois. If I had known that Mr. Dadant had started "the movement," I would have said so, but I was not aware of it.

If this meeting is called while the Legislature is in session, it appears to me that Springfield is the best place to hold it, although for selfish reasons I would prefer Peoria.

When I complained to the State Board of Agriculture, on account of the low premiums offered for the products of the bee, I was told that it was our own fault; that we should bring the subject before them, at their session at Springfield.

MRS. L. HARRISON.

Peoria, Ills., Jan. 21, 1891.

The article to which Mrs. Harrison refers is as follows:

Bee-keepers of this continent, and the rest of the world, are awakening to the importance of having a creditable exhibit of the products of the honey-bee, at the Columbian Exposition, and are now busy making the preliminary arrangements. National, State and local bee-keepers' associations have taken action in the matter, and it is to be hoped that it will ultimately lead to success. In order to do this, money is necessary, and every State should be asked for a contribution. The executive committee of the International Society, appointed Dr. A. B. Mason, of Auburndale, O., to present the subject before the convention, which he did in an able and efficient manner. He said: "I expect to ask the State of Ohio to grant $1,500 for the Ohio bee-exhibit, and each State ought to have a grant, in order to make an exhibit worthy of the interest represented."

STATE BEE-KEEPERS' SOCIETIES.

I like the way Indiana manages her State associations; they are held at the Capital, which is central, and one convention follows another. Horticulturists and apiarists are twins, belonging to the same family. One cannot well do without the other; apiarists might thrive without horticulturists, but where would the other be, if bees did not act as "marriage-priests" in fertilizing the bloom of their orchards? There are no other insects so early in the season to perform this work, and if fruit sets at all, this work must be performed by bees, or left undone.

In order to produce a perfect apple, five distinct fertilizations must take place. Who has not seen apples shrunken on one side, caused by lack of fertilization? State societies of horticulturists and bee-keepers, might be held at the same place, one over-lapping the other, and a union session held, in which the fertilization of plants could be discussed by these societies. Another advantage might be gained by this union of time and place, and that would be in the reduction of railroad rates—a small society is refused excursion rates, while a large one is not.

STATE SOCIETY FOR ILLINOIS.

Illinois has her State Horticultural Society and Poultry Association, but none of bee-keepers. And why? She has plenty of material for one, and Illinois is coming to the front in the production of honey. This State Society should meet at the Capitol, in Springfield, and be composed of delegates from every section. Bee-keepers would then be in a condition to ask assistance for the support of its yearly meetings, and for the Columbian Exposition. Who will make a move in this direction?

On my table is a call for the Nebraska State Bee-Keepers' Association, to meet at Lincoln Jan. 13, 14 and 15, 1891. The State Horticultural Association meets at the same time, and arrangements will be made to hold joint sessions. Is Illinois to be distanced in the race by her sister States? I hope not; but she must be up and doing, or she will be out in the cold.

Perhaps it will be better to incorporate the State Society and have it meet at the Capital of the State.

We like the plan of acting in concert with the horticulturists, as suggested. It is time for the officers of the "Capital Society" to have something to say. How is it Brothers P. J. England, President? and C. E. Yocom, Secretary?

Here is a letter from the Vice-President, A. N. Draper, on the matter which will be read with interest:

Dr. A. B. Mason's suggestions, on page 85, of *Gleanings* for Jan. 15, seem to me to be to the point, and, as the Fair is to be held in our State, it seems to me that it behooves the bee-keepers of the State of Illinois, to bestir themselves and see that their exhibit is second to none in the country. To do this we have no small job, and must have the co-operation of every live bee-keeper in the State.

The Illinois State Association should be inaugurated at once, and incorporated as soon as possible. It should have the co-operation of every local and county bee-convention in the State. Its meetings should be centrally located, so as to draw out an attendance of bee-keepers from all over the State.

I would suggest that Springfield be the place to organize—the Capital Bee-Keepers' Convention being located there. The Union Bee-Keepers' Association is located almost due west. The Turkey Hill Association south, near Belleville, and I think there are, or have been, several other societies scattered over central, eastern and southern Illinois.

The societies in the northern part of the State are almost as convenient to Springfield as to Chicago.

Why not begin right and make it a State organization indeed, as well as in name? We have the bee-keepers, we have the bees, and we have the resources for work. If these are properly developed and brought out, we need no outside help. So locate at Springfield, and get all the available forces in the State, to work at once.

I believe the different counties can be induced to help this thing along, as well as the State. In this way we can approach almost every individual in our State Legislature, with men from his own district. Of course we would gladly welcome any bee-keepers from our sister States, but the work will have to be done by those of our own State, and the expenses arranged for by them.

The suggestions by Dr. Miller and C. P. Dadant are good, and should be put into practice at once. A. N. DRAPER.

Upper Alton, Ills., Jan. 21, 1891.

The executive committee are to call the next convention, and we suggest that it be called at once, and invite the bee-keepers of the whole State to come and organize a State Society, by either changing the Capital into a State organization, or creating a new one.

Let immediate action be taken, and the work can be done at once.

The suggestions of the officers of the Northwestern, came too late for this issue.

The Southwestern Wisconsin Bee-Keepers' Association will hold its next convention in the Court House at Lancaster, Grant county, Wis., on March 25 and 26, 1891. All who are interested in bee-culture and convention-work are cordially invited to attend. The topics for essays and discussions are—

Spring dwindling and its cure—Edwin Pike, Boscobel.

Bee-enemies, and how to avoid them—N. E. France, Platteville.

Foul-brood and its cure—N. E. France.

What are the most destructive birds that kill bees?—Edwin Pike, Boscobel.

Queen introducing and rearing—A. E. Coolie, Mt. Hope.

What is the best way to ventilate a cellar for bees to winter in?—H. Evans, Wauzeka.

How shall our members manage to sell our honey crop to the best advantage?—Edwin Pike, Boscobel.

Does it injure a queen to have her wings clipped?—M. M. Rice, Marion.

Which will produce the most honey—a colony allowed to swarm (counting in the work of the swarm), or one kept from swarming?—Delos Ricks, Boscobel.

Which is the most profitable way for increase, by artificial swarming, or by natural swarming?—M. M. Rice, Boscobel.

Robbing, its cause and cure—H. Gilmore, Georgetown.

Is it profitable for a farmer to keep bees?—E. S. Morse, Fennimore.

Location of an apiary and stands, tools, etc.—B. E. Rice, Boscobel.

Other occupations for bee-keepers, which pay well, to combine with it?—Mr. Prideaux, Bloomington.

EDWIN PIKE, *Pres.*
BENJ. E. RICE, *Sec.*

If you have a desire to know how to have Queens fertilized in upper stories, while the old Queen is still laying below—how you may *safely introduce* any Queen, at any time of the year when bees can fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and is as interesting as a story. Price, bound in cloth, $1.00. For sale at this office.

Prizes for Honey.

Will you kindly allow me the privilege of asking Mr. M. H. Hunt, Mr. W. Z. Hutchinson and Dr. Mason to each send me the Prize List of the exhibition at which they respectively took $192, $175, and $149, in prizes, for a single exhibit of *honey*—bees, queens and appliances not included? It will answer my purpose equally well, Mr. Editor, if you will refer me to the exhibitions at which those prizes were taken, as I will probably be able to get their prize Lists from the Secretaries. I have always believed that the "Toronto Industrial" offered the best prizes for honey of any exhibition in America, but the report of the Detroit meeting makes it manifest I am mistaken. I am much interested in this matter, being a member of the Board of the Toronto Industrial, and specially charged with the duty of looking after the interests of the bee-keepers. If armed with the Prize Lists of other associations which make it possible for an exhibitor to secure double the prizes Toronto gives for honey, I can, I think, do the bee-keepers of Ontario some good, when the committee meets to revise the Prize List for the coming show.

Owen Sound, Ont. R. McKnight.

The proof of Mr. McKnight's queries were sent to the persons mentioned, and here are the answers:

In reply to Mr. McKnight, I will say that I received the premiums mentioned at the Detroit International Fair, in the past season. He, no doubt, can get a Premium List by sending for it.

M. H. Hunt.

I never took the amount mentioned on *honey alone*, and I think that *none* of the exhibitors did. The amount gives me the *sum total* secured upon honey, bees, beeswax, implements, etc. If Mr. McKnight meant *honey alone* in his essay, he was misunderstood.

W. Z. Hutchinson.

* * *

☞ Mr. C. F. Muth, of Cincinnati, O., has become a life-member of the North American Bee-Keepers' Association. Who will be the next? We want at least 50 more life-members.

* * *

☞ The type of the last line of the first paragraph on page 107, got "pied" last week after the proof was read, and was unintelligible.

Wisconsin State Convention.

The Seventh Annual meeting of the Wisconsin Bee-Keepers' Association will be held in the Capitol, at Madison, on Feb. 4 and 5, 1891, at 10 a.m. The following is the programme:

Address of the President—C. A. Hatch.

A bee-cellar—Benj. Rice.

Use and mis-use of foundation—T. E. Turner.

Discouragements of bee-keeping—S. I. Freeborn.

The following questions will be discussed: Why do you not join the Bee-Keepers' Union?

Will a reduction in the price of sugar lower the price of honey?

Which is the best wide frames, T supers, or what?

Do fruit growing and bee-keeping go well together?

The Wednesday afternoon meeting will be held in connection with the State Agricultural and Horticultural Societies, and as a natural result, the time will be both profitably and pleasantly spent.

C. A. Hatch, *Pres.*, Ithaca.
Dr. J. W. Vance, *Sec.*, Madison.

In compliance with a very pressing invitation, we have agreed to attend this Convention, and hope to meet many of our friends there.

* * *

Rates for the Ohio Convention.

A one-and-one-third rate of fare has been secured for the round trip on all railroads in Ohio and Indiana, to attend the meeting of the Ohio State Bee-Keepers, to be held in Toledo, at the Merchants' Hotel, on St. Clair street, on Feb. 10 and 11. Rates at good hotels are from one dollar up.

In order to secure reduced rates of fare, buy certificates of your railroad station-agent, to attend the "Ohio Republican League Convention and Banquet," and I will fix them, so that they will be good for one-third return fare. Certificates can be bought on Feb. 10, 11 and 12, and will be good for return up to, and including Feb. 14.

For parties coming from Michigan, the fare is two cents a mile each way, when parties of ten or more come and return together, on one ticket, which must be bought as above, for "Ohio Republican League Convention and Banquet." Write me for any further information that may be desired.

A. B. Mason,
Pres. O. State Bee-Keepers' Association.

A Law is needed against spraying fruit trees with poison while they are in bloom. A correspondent writes about it, as follows:

> It seems to me that the matter of spraying fruit trees while in bloom, and the consequent poisoning of bees, is something that might well occupy the attention of the Union. Much spraying will be done in the Southern part of Illinois, hereafter, and, of course, ignorant or malicious people will do enough of it while trees are in bloom to poison many colonies of bees.
>
> A friend, living some 12 miles away, lost 60 or 70 colonies that way, last spring. Cannot the Bee-Keepers' Union get a law passed in our Legislature, this winter, to make it a misdemeanor, with suitable penalties, to spray fruit trees while in bloom.
>
> Such a law would benefit the fruit-growers hardly less than it would bee-keepers. T. P. Andrews.
>
> Farina, Ills., Jan. 5, 1891.

We refer this matter to our friend, J. M. Hambaugh, of Spring, Ills., who is in the Legislature, and will there look out for the interesrs of bee-keepers. Mr. Andrews will please write to him about it. Others who are interested in good government and beneficial laws, should do the same.

◆

An Excellent Periodical.—Professor William Soule, Librarian of Mount College, at Alliance, Ohio, and also one of the most popular instructors in that well-known institution, has this to say about the Illustrated Home Journal, in a letter just received :

> During the past 16 months we have received regularly the Illustrated Home Journal at our College Reading Room. It is an excellent periodical. It is clean, entertaining and instructive.

Yes, it is just such a magazine as should be placed in every home, where its excellent influence may be felt among the rising generation. Get your neighbors to subscribe for it, and thus help to spread "clean, entertaining and instructive" literature where it may do the most good. You cannot do a nobler thing than this.

The Wiley Lie about manufactured comb-honey gets another black-eye from the pen of Mrs. L. Harrison, in the *Prairie Farmer* of last week. She writes thus :

> Comb-honey is now retailing at Peoria, Ills., for 25 cents for a pound-section, and very few pounds can be had at that price.
>
> What has become of all those "manufacturers of comb-honey" that we used to hear so much about ? If there could be such a thing as manufactured comb-honey, now would be a good time to fire up the factories and run them night and day, for there is very little comb-honey to be had at any price.
>
> The scarcity of this product, at a time when it commands a good price, is evidence of the truth of the statement that comb-honey never has been and never will be manufactured.
>
> A score of years ago, small glass jars filled with glucose, in which was a small piece of comb-honey, were to be seen upon the shelves of all grocers, but the people were caught only once, and the stuff could not be sold. The bee-keepers all over the land raised such a "hue and cry" about it that an imitation of the pure article is now difficult to find ; pure extracted-honey is sold so cheaply now that it will not pay to adulterate it.

◆

Keeping Sheep and Bees.—There are three German adages which run thus :

1.—Bees, sheep, and angle-rod, be sure,
Will make thee quickly rich—or poor !

2.—Sheep, doves, and bees, (naught surer,)
Will make thee nor richer nor poorer !

3.—Keep plenty of bees and sheep,
Then cosily lie down and sleep !

In the kingdom of Bavaria, over 200,000 colonies of bees are kept, according to the official returns made to the Government; and these, it is stated, yield an average annual profit of 75 per cent. on the investment. In view of this result, a German writer thinks there is rather more truth in the last of these adages than in the first two.

◆

A Nice Pocket Dictionary will be given as a premium for only **one new** subscriber to this Journal, with $1.00. It is a splendid little Dictionary—just right for the pocket. Price, **25 cents.**

Queries and Replies.

Space Over the Brood-Frames.

Query 750.—Is a deep cover over the brood-frames (say from 3 to 6 inches) more desirable than one leaving just a bee-space there ?—Minn.

No.—James Heddon.

I think not.—C. C. Miller.

No, indeed.—R. L. Taylor.

I think not.—Eugene Secor.

A bee-space.—Mrs. L. Harrison.

We prefer an 8-inch cover, for all purposes.—Dadant & Son.

A bee-space is preferable, and is all that is necessary.—C. H. Dibbern.

All things considered, I prefer the bee-space from ¼ to 5/16.—H. D. Cutting.

Yes, unless a shade-board is used, or the hives are set in a shady place.—A. B. Mason.

A deep cover is cooler in the Summer, and allows a necessary space for a quilt in Winter.—P. L. Viallon.

No, but in out-door wintering such a cover is of advantage, with an absorbent cushion on the frames.—G. L. Tinker.

Yes, with me it would, for I use a mat and honey-board, and the lid will serve to fill with absorbents for wintering.—J. M. Hambaugh.

I use one 8 inches deep, and like it very much as a protector of the sections in Summer, and of the chaff cushion in Winter.—G. M. Doolittle.

No. For out-door wintering, it is better that there be no space above the frames. Instead, let there be passages through the combs below the top-bars.—M. Mahin.

A deep cover is more desirable, from the fact that it will, if properly constructed, admit of more ventilation in Summer, and in Winter it can be packed with absorbing material.—J. P. H. Brown.

It is better in the Spring, as we can pack warmly above the bees. At other times I see no advantage. Of course we should use a shade-board in mid-summer.—A. J. Cook.

I do not understand the question. If it refers to wintering, I should say, use the deeper cover with a mat or quilt over the frames ; if to Summer, the bees should not be allowed above the tops of the frames, except to go into the sections, etc.—J. E. Pond.

So much depends on what you really mean, that a single answer is not likely to touch the point on which you wish information. In the Winter time, I prefer to have a shallow super, which, perhaps, you call a "deep cover," adjusted on top of the brood-chamber, in which some good absorbing substance can be put, to absorb the surplus moisture arising from the bees ; and to give room for circulating air above the packing, to keep it dry. In the Summer the bee-space is all that is needed.—G. W. Demaree.

The question is too indefinite to answer intelligently. There are times and circumstances when a space over the brood-frames could be utilized advantageously, even though it is not generally thought advisable to have it there. Particularly in Spring, or in Winter, for protection, if they remain out-of-doors. —The Editor.

Wired Comb-Foundation, etc.

Please answer these questions through the American Bee Journal, of which I am a reader, and would not like to be without for double the amount it costs.

1. Should comb-foundation be put into wired Langstroth brood-frames so as to fill the whole frame all around ? or should a little space be left between the foundation and the bottom, or on the sides, to allow the bees to pass from one frame to another ?

2. Is there any danger of comb-foundation breaking in transit, when it is very cold or freezing weather ?

Math. Rader.

Raven Stream, Minn., Jan. 9, 1891.

[1. It is good policy to leave a little space each side and at the bottom, to prevent "bulging," when worked out by the bees, as well as for passages.

2. Comb-foundation will not admit of much handling in very cold weather, but in transit, if it is properly boxed, there will be no danger of its being damaged by ordinary transportation.—Ed.]

Supply Dealers desiring to sell our book, "Bees and Honey," should write for terms before issuing their Catalogues.

Topics of Interest.

Little Here and There.

MRS. M. J. SMITH.

A penny here, and a penny there,
And away goes the hard-earned money,
A sip just now, and a taste by-and-by
Empties the jar of honey.
For pennies make dimes and dimes make dollars,
And dollars make fifties, and so on;
And, sip-by-sip, was the honey gathered
From flowers the soft winds blew on.

And the wicked thought, and the envious wish
Cause the heart to grow hard and cruel,
And the bitter answer, and wrathful look
To the fire of hate, adds fuel.
But the kind word falls like a soft caress,
On the heart o'ercharged with trouble;
And the good seed sown on the wild, broad lands,
Brings a golden harvest, double.

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The World's Columbian Exhibit.

DR. A. B. MASON.

I have done lots of thinking about the apiarian exhibit at the World's Columbian Exposition for 1893: and I have thought of this plan for State work:

Let each State bee-keepers' society appoint a committee to look after the securing of an appropriation by the State legislatures or assemblies, for the making of a suitable exhibit. Also another committee to see that the honey, bees, beeswax, foundation, and everything relating to our industry in their State, is collected and made ready for exhibition; also choose the best man or woman they may be able to secure, to go to Chicago and put everything in the best possible shape and position for the best display, and look after the State's exhibit during the exposition, and then re-pack every thing and return to the owners.

"Now, this all looks easy enough on paper," some will say, "but how are we to be paid for our trouble and expense?"

Well, that is just what has bothered me, and is just what I have been trying to "grasp by the horns." This very subject helped to get me 500 miles from home, to attend the convention at Keokuk, in the hope that some one I might meet would solve the difficulty for me. Vain hope! No one that I consulted knew more than I did about it.

I've thought over and over the offering of premiums in some shape, but nothing satisfactory presented itself. With the premium plan, somebody (and probably several somebodies) would "get left." By the plan I suggest, each will get just the amount he will be entitled to.

The plan is this: Let each one who is willing to help, make his own State exhibit what it ought to be, notify the committee, above spoken of, as to what and how much he will exhibit, making an itemized bill of what he is willing to furnish. For example, some one says, "I will furnish—

500 lbs. of comb honey (basswood) in 1-lb. sections, 25c. per lb., 100 lbs.............	$18.00
100 lbs. of comb honey (buckwheat) in 1-lb. sections.	
500 lbs. of extracted-honey (white-clover) in 2-lb. Muth honey-jars; single, 35c; doz.	3.75
1 straw bee-hive, 50 years old.	
1 smoker (Bingham's)..........	1.75
1 colony of bees (Italian) in Langstroth portico hive.....	8.00
1 colony of bees (Carniolans) in Simplicity hive.............	6.00

Every package, or article of every kind, to be *distinctly* marked with the owner's name and postoffice; and if for sale, have the price also marked on it. Then let the committee say what they think best to have placed on exhibition, and then the owner can prepare and ship all to Chicago, with all charges paid, directed to the party having charge of the arranging and caring for the exhibit.

The reason I suggest that the committee should say what might be sent, is this: Perhaps 10 or 20 might be willing to send one or more bee-hives, colonies of bees, etc., when but one of a kind would be needed; but the more honey and beeswax sent, the better.

Now for the most important part—the *pay* for all this work, risk and expense.

From the amount appropriated by the State, pay all expenses incurred at Chicago, including the pay of the party having charge of the exhibit, unless otherwise provided for, by the State. Then divide the remainder among the exhibitors, according to what they have on exhibition; so that one exhibiting a colony of bees or a crate of honey, or other articles, will get the share to which it may be entitled.

A person sending 2,000 pounds. of honey would be entitled to twice as much pay as one sending 1,000 pounds, provided other things are equal; for certainly no reasonable person, who sends a thousand pounds, in tin cans, could expect as much pay as one who sends the same amount, nicely put up, in glass receptacles of different styles. But there are unreasonable people in all pursuits, and ours is not an exception.

When the exposition is over, the person in charge, should re-pack without charge and return to the owners, every thing not sold.

With such an arrangment, all things would be in common for the display from each State. The honey belonging to A, B, and C, would be used, just as though it all came from one person, so as to make the best possible display; and each package being marked with the owner's name, would tell to whom it belonged.

It is more than probable, that parties placed in charge of some of the State exhibits, will know but little about arranging things, so as to make the best display, and perhaps have less taste than knowledge. In such cases, some one who *has* the taste, will have to be hired to do the arranging.

Perhaps the next N. A. B. K. A. meeting will formulate some plan for general adoption; but, in the meantime, working and planning should go forward.

A. B. Mason.

Since writing the above, I have attended the Michigan State Bee-Keepers' Convention at Detroit, and suggested the above plan, and that Society has started "the ball rolling," and appointed the needed committees.

Another suggestion might perhaps not be out of place. Some States have no bee-keepers' societies to organize the work. Would it not be a good plan for the leading bee-keepers of such States to get together and organize, or, by correspondence, agree upon some plan, and appoint suitable persons to look after the needed legislation and appropriation, and for doing all other needed work? for, if this matter is left over till next Winter, it may be too late.—*Gleanings.*

Auburndale, O., Jan. 10, 1891.

Foul Brood—Questions Answered.

AUG. KOEPPEN.

As requested, on page 854 of the Bee Journal for Dec. 27, I reply to the questions there propounded by Mr. McEvoy.

1. My bees, in the Fall of 1889, were in good condition, and without any signs of foul-brood, as I had cured them that Summer. In May, 1890, I looked them over, and cleaned the hives out. The bees were then in the same condition, without the least indication of foul-brood, so I thought that I had them cured all right.

2. In June, as the white clover began to blossom, I looked them all over carefully again, and found 7 diseased colonies. I did exactly as Mr. Pringle advised. I got a clean hive and clean frames ready. Towards evening I moved the hive away and put the clean one in its place, with foundation starters, shook the bees off, put the frames of brood which I thought were worth saving in another hive, and those that were not worth saving, I melted into wax. The frames I saved, I left some bees on, and covered the hives with carpets and bags, closed the entrances, and left them alone for ten days, and treated them just as the other ones. From these 7 colonies which I tried to cure, 6 swarmed out.

3. In July, as the basswood began to blossom, I looked them over carefully again, and found 12 or 14 diseased colonies. These I treated the same way, except that I put in foundation about 6 inches long. In some I put 3 frames, and in others 2. The brood I saved from these diseased colonies I put into 3 hives, placed one on top of another, and treated them as stated before.

I had 3 hives on shares from a widow. With these I took particular pains. I bought new foundation, and put in each one two full sheets; but every one of the bees left the hives.

4. I treated them just as the other ones, but these did not leave the hives. My hives are 4 feet apart from entrance to entrance. I treated them all at once.

5. No swarms except those that left the hives.

6. Not one ounce of honey.

7. For both, but did not get any.

8. I always winter on Summer stands. I put a couple of sheets of woolen cloth on top of the frames, then 3 or 4 sheets of paper, then 3 or 4 sheets of cloth again, and a foot of good dry leaves on top of all. I packed them in October, and left them until May.

9. In the middle of July I found my bees all in a starving condition, as the basswood had only yielded a little honey for three days. I bought a dollars' worth of sugar, and made it into syrup with medicine, and fed them all together in little troughs outside of the hives. I kept on every week, but the bees seemed to dwindle away, and have no honey.

10. From these 37 colonies about 18 swarmed out. I doubled them about the

first of September, and took the 4 weakest ones and put them together. These 4, afterwards, had not a pound of honey. I then put the 3 weakest ones together, and fed these 2 combination colonies outside of the hive. The latter part of September I put these 2 together, so that I only had 1 colony from the 7. I have doubled the other ones the same way, so that I have only 3 left. These 3 have old comb, but are free from foul-brood. The feed was made from 3 pounds of granulated sugar to 1 quart of water, and mixed with medicine made from 3 ounces of bi-carbonate of soda, 1 pint of salt, 4 ounces of alcohol, and 1 ounce of salicylic acid mixed with 2 quarts of soft water. For every dollars' worth of sugar, I put a good tea-cupful of the mixture used.

11. In the evening, in the month of September. Some in the first part of the month, aud some in the latter part. Every comb that had the least bit of foul-brood in it, I melted into wax, and left only good combs, and fed the bees this medicated syrup.

12. I found in some of those in which I had put new foundation, and where the bees had not left the hive, some foul-brood in the Fall, and also in other hives that had not had the foul-brood in during the Summer. The foul-brood in these was not as bad, as I had fed them with this medicated syrup.

13. Perhaps it would be a good thing to put in 5 or 6 combs with sealed honey as you say, but I think it is a hard thing to get such honey in a poor season. I would rather feed the bees this medicated syrup for the foul-brood, as it has proven to be very effective.

14. My son, five years ago, bought 3 colonies, and brought them to my place. One of these had foul-brood, and we soon found it out. I told him to cure them the way I have mentioned, but he thought that he would cure them in the manner this Professor, from London, had stated. He undertook to cure them, but he soon found out that he could not, and all the bees soon had the foul-brood. I am about 10 blocks from any apiary, and they all claim that they have not foul-brood. I am not sure of this, but I am afraid there are some hives, or old trees, around that contain foul-brood.

15. I melted them all into foundation. I have some saved, but I do not think that I will ever use them.

16. I would use sealed comb, if I had it, but if I had to buy the sealed combs, I would rather feed sugar to the sick colonies.

17. My bees did not swarm this year; but previous seasons I put them on foundation and empty combs. My hives are the same as Mr. Jones', and the frames are put in the same way, but my hives are double-walled, 3 inches thick, and filled with a layer of tow between the walls 1¼ inches thick.

18. I work in a woolen mill, and when my bees need attention, I stay at home. When they swarm, I get some one to watch them.

Now, friend McEvoy, do not think that I say that your cure was not good, I thought it was, but with me it has been an entire failure. Mr. Pringle says that you must cure the bees in a good honey season. I learned, years ago, that in a good honey season the disease will cure itself. What we need is a cure in a poor season, when foul-brood is more plentiful. Last Fall I thought just as Mr. Pringle, that I had solved the problem; but this Summer I found that I knew nothing of curing foul-brood. I hope we will soon obtain more knowledge about this disease. I am not discouraged yet, and will start this Spring with all the hopes of a successful year. My bees acted differently this year from any other. It seemed to me that they did not work at all. There was plenty of clover in blossom, and there is basswood within a block of my place, and buckwheat within two blocks. Everything seemed to blossom good, but I did not get any honey. Can any one tell me whether the fault was in the bees or in the flowers?

Flint, Mich.

Texas Apicultural Notes.

A. C. ATEN.

I had a pretty fair season for honey in 1890. I wintered about 160 colonies, and have never had any loss except from starvation—the smallest colonies will winter through, if they have plenty of honey. We have the most trouble from the middle to the end of April, and when a person has as many colonies as I have, and keeps them in three different places, if he is the least careless he will lose some. I lost 8 or 10 colonies last Spring in that way. I increased to 196 colonies last season, and got 9,400 pounds of extracted-honey of a very fine quality.

I did not have a single swarm, and I am never troubled with swarming, as I always give my bees plenty of room, as I work for extracted-honey altogether.

My honey is nearly all sold without any effort, and I could sell as much more if I had it. Most of it was sold in Texas, one lot went to England, and one to West Point, N. Y. It netted me 6 cents per pound at home, which is the best that can be done here.

The season was very dry after the middle of May, but the bees continued to gather honey slowly all the Summer and Fall. There was no great honey-flow at any time. The bees are now in excellent condition.

The Winter has been dry, and very little freezing. Roses were in bloom in the garden until Christmas. Bees are flying nearly every day. My bees scarcely ever attempt to rob each other, and never give me any trouble in that way. This is a prairie country, with some timber along the streams, but some of my bees are a mile from any timber, and appear to do as well as the others.

In regard to telling which hive contains the queen when divided, my experience is that, when the queen is taken from a colony, they always show uneasiness for a few hours, searching every where for her.

My apiaries are situated from 11 to 16 miles north of Austin, the capital of the State, and I have had no failure in the honey crop for the 8 years I have been in the business. I think that there are even better situations in Texas than this; then, again, there are plenty of places where bees will not do well. I like the new form of the BEE JOURNAL so well that I send 50 cents for a binder. It will make a nice volume.

Round Rock, Texas, Jan. 14, 1891.

Adulterated Honey and Protection.

W. HARMER.

With your permission I would like to say a few words to my brothers of the National Bee-Keepers' Union, for I see breakers ahead, which means something for us to do.

First, I would mention the fact that the sugar men are getting a bounty of 2 cents per pound on the production of sugar. Did it ever occur to you, that honey-producers are just as much entitled to a bounty as the sugar-men. For myself I do not believe in tariffs, rebates, or bounties, but have wondered why McKinley, or some of his belief, do not think of the honey-producers. Where is our advocate of legislation for bee-keepers? Perhaps he, like myself, has gone back on class-legislation. If this is the case, let us ask to have the sugar-bounty law repealed. Why should honey-producers be taxed to pay that bounty, for we not only have to help pay it, but we have also to suffer the consequences, viz: the cheapening of sugar, which means a lower price for our honey.

Another point I would like to touch on (and I would especially solicit the ears of our California brothers), and that is, a package, or rather a jar (vase shaped) is sold by a Milwaukee, Wis., firm, labeled California Honey; no producers' name or other wording is on it. A friend of mine bought a jar of it, and I being at his house, he would have me sample it, and as he handed me a spoon, he said, "I like it, and yet I don't like it."

I at one time, perhaps eight years ago, tasted what they call here corn-syrup, and the very same flat taste struck my palate for the second time, when I sampled this California honey. There was undoubtedly some honey in it, and it *may* have come from California, but I say that there is no name too bad for men that would thus injure the whole bee-keeping fraternity, and more especially our brothers and their beautiful country in the West, which produces excellent honey. Come, brother bee-keepers, lend a hand, we want live men in every large city, and in every town and village in North America, to help protect our industry. I would like to see the contents of one of these jars analyzed.

Manistee, Mich.

Bee-Shed for Winter Repository.

J. H. M. EDWARDS.

I am a novice in the bee-business, and have chosen the Langstroth 8-frame hive, using supers to hold the sections. I use the 1-piece section, 4½x4½, and with 7 to the foot. I use the queen-excluding honey-board (break-joint with zinc strips, perforated, and inserted in the spaces), and wired brood-frames with full foundation, so that they will be strong and bear handling.

Considerable is said about bees starving in Winter, because they cannot pass readily from one frame to another. Some say, cut holes in the comb in the fall; others say, place bent sticks over the frames to hold up the cloth. I did not do either. I simply left the honey-board on and spread the cloth over that, then, putting on a super, I filled a muslin sack (of the size to fit the super) with dry chaff, put it in the super, put on the cover, and called it a job. Is it a good job?

Last Winter I put my bees in a cellar, the temperature of which I could not control. How did they winter? Well, I lost nearly all of my bees. This Fall I built a small bee-shed, 21x8 feet, with a 3-foot overshot on the south. This shed is built with a double board wall, with oiled building-paper between, also paper between the sheeting and shingles. This makes it dark as night within, when closed. On the south side I have double doors reaching the entire length, and 3 feet wide; these are hung on hinges, and open upward, one inside, and the other outside, and are fastened by wooden buttons. My purpose is to keep bees in this shed all Summer, and in Winter, tier up the hives facing the south, and at intervals during the Winter, when warm enough, I can open these doors and let my bees have a purifying flight. My bees were put in the shed early in November, and I have let them fly several times since, which they seemed to enjoy. The weather has been unusually fine here, and my bees seem to be in good condition, so far.

Some weeks ago a bee-man from Wisconsin, called on me, and in looking the shed and bees over, he suggested that during à long seige of cold weather, the shed should be warmed at intervals. Would it be wise to put up a small stove and warm up the shed moderately every week or ten days, say 40° to 50° Fahr., not letting the heat of the stove strike the hives?

My bees are high-grade Italians. I have 15 colonies, and if I succeed in wintering them, you may hear from me again.

Logan, Iowa.

Some Superstitions About Bees.

REV. STEPHEN ROESE.

The following items I have translated from the Leipziger *Bienenzeitung*, page 207.

Superstitious belief, and fabulous ideas, were not only fostered during the dark ages of the world, but were carried along even into the present enlightened age of reason and good sense.

The *Mulhauser Tageblatt*, has the following item of interest in its local news column: A few days ago a noted bee-keeper died at Colmar, Alsace, who was the owner of 80 colonies of bees. After his death his widow went to each of the hives, informing the bees of their master's death, believing if this notice was neglected the bees would dwindle away and perish.

In Switzerland, the stealing of a colony of bees was regarded as a great crime, and punished with death, even at the close of the last century.

In Westphalia, Germany, it is with many people at present, the rule to introduce a newly married couple to the bees, if any were kept by the family.

In Belgium and France, it is the custom to adorn the bee hives by tacking red cloth on all the hives on such occasions, and with some people it is the rule to move the bird cage, flower pot, or the bee hives, at the death of the owner.

In every part of Germany, the fabulous idea rules, that if a new colony issues and settles on a house, it is an omen of destruction by fire.

In France, it is the belief among country people, that in case of the death of a bee-keeper, the bees must be notified to that effect, and, as a sign of mourning, a black cloth is fastened on each hive, and a small wooden cross nailed at the lower end of the bee-house. In some parts of the country the ceremonies are still more imposing, the whole family with one accord, move to the apiary, and inform the bees in each hive, of the sad news of their master's death. This is done in loud words and by knocking with the house-key 3 times on each hive. Even important events which befall the country and nation, the bees are informed of.

In Lincolnshire, Essex and Cornwall, England, the belief is current, that in case of death in the family, unless the bees are notified by knocking on the hives, they would leave, or dwindle away. In Lincolnshire the belief is current, that the bee hives must be covered with black cloth, as a sign of mourning for their master. Some people in Northhamptonshire, believe that if a swarm fly into a house, it is a sign of death, and if a swarm settle on a dead tree or limb, it is a sign of death in the family within one year. In Yorkshire, some people invite the bees to the funeral.

In some parts of Germany the people believe that to purchase bees for money, will prevent their prosperity, also the selling of the same for cash, and that the only way to secure success, is by receiving them as a present, or by stealing them, but leaving the value in something else.

Aside from all these superstitious ideas, some bee-keepers of the present day, are given to the belief that the honey bee has an ear for music. Judging from facts, when such bee-keepers, at the time of swarming, have not fiddles, flutes, and fifes on hand, or Italian organ-grinders, they resort to other music, with old tin pans, cow-bells, shot-guns, etc., believing that this noise will prevent swarms from absconding. Oh! *sancta simplicitas.*

Nearly all literary men in apiculture, agree, that the poetical view of Virgil, that the honey bee originated from corpses and carcasses, is to be dated back to the dark ages of Egypt, from whence this fabulous idea was carried to the Celts, Creets, Romans and Germans in Europe, even to the tribes of the Indies. Therefore the fabulous idea of the origin of the honey bee, was carried from one part of the earth to the other, and was believed, by many, as late as the beginning of the present century.

The English writer, Holinshed, compiler of the Chronicles of England, Ireland, and Scotland, in 1807, says: "The hornet, wasp, and bee, and other similar insects, originate, as commonly believed—the former from decomposed horses, the second of decaying apples, pears, etc., and the last named from dead cows and oxen." Swammerdam makes mention of great men in his day, such as Gœdært and DeMai, who advocated that they originated from manure worms.

From the foregoing statements it can be seen that the honey bee, during all ages of the world, has been an object of study and admiration, and, had science and art, and with it bee-culture of the present age, not lifted the veil, which during ages, had kept this art and industry shrouded in mystery, apiculture would, ere long, have drifted into the land of dreams, where mystifiers would have found the "corpse and carcass" originated honey bee, in the shape of a phantastic Oriental princess.

Maiden Rock, Wis.

The Importation of Queens.

D. A. JONES.

This subject is one upon which there will be many different opinions, but I believe that I have given the matter more study, and have experimented more largely with it, than any other bee-keeper of the present day. Perhaps I may also say that I have spent more money on it than I shall ever do again.

It is true that the importation of queens has done much to stimulate and improve apiculture, but I am not convinced that even at this date, there are any better bees to be found in the world, than those we at present have.

The breeding of bees of superior quality, receives more attention in America (when I say America, of course I include Canada) than elsewhere. The varied climates, the abundance of flora of varied qualities, all tend to assist us in this land, because these play no small part in the production of the races. Of course, without care and skill on the part of the apiarist in his selections for breeding, all these will avail but little. The friendly strife among bee-keepers, to produce bees of the best quality, is sure to have a beneficial effect.

The crossing of the various races, has been of considerable importance in bringing our bees up to the present high standard. I am convinced, after extensive experiments, that no pure race of bees is, or has been imported, that have all the good qualities required, and no fixed or pure race possesses the same qualities and dispositions in every respect. If their habits and dispositions are thoroughly studied and inquired into, we find them varying after the same manner as the human race.

As there are no two persons alike, neither are there two colonies alike, and I may add, there are no two queens alike. The fact that they may be of a certain color, or that they may possess a certain number of bands, is no guarantee of their value in dollars and cents. Because a certain number of men are white, it does not follow that they are equally intelligent, industrious and successful, for their dispositions and habits differ. So with the different colonies of bees, although they may all be of the same race. Therefore, because queens may duplicate themselves in color and markings in breeding, this does not show their exact value. If we can have these peculiar markings, and all the other good qualities as well, so much the better, but let us have, above all things, quality first; as it is with the colonies I have just spoken of, so it is with the importation of queens. Their appearance may be just the same, but the experienced importer, who tests his queens thoroughly, will always find some that are scarcely worth anything, while others produce colonies of great value.

In-and-in breeding should be prevented as far as possible, and by selecting from our very best colonies we are liable to secure the best results.

I do not mean to say that no benefit will be derived from the importation of queens, because there are many bee-keepers in Europe and in the East, who are thoroughly capable of testing the queens which they produce, and as they find that they have obtained superior queens, these will, of course, assist us. My principal opposition is to the importation of queens without regard to quality. The superior stock which we have at the present day, has been produced by this careful method.

Are bee-keepers less intelligent than the breeders of other stock ? Of course we have not the same opportunities of isolating and of selecting, and it requires more skill and care in the breeding, but if we are careful to carry out all that does lay in our power in this direction, we can in the near future become exporters instead of importers.

I observe that influence is likely to be brought to bear on the United States government, for the purpose of getting an appropriation sufficient to enable American bee-keepers to search and test, races other than those at present within their possession. I hope that some better ones may be found, but I have no faith in the bees which may be found in Africa. If the Cyprians are cross, the African bees are much crosser.

I have been subjected to some pretty bad stinging, but I shall never forget the attack which was made on me in the Khedive's garden at Alexandria. These were black bees, and not quite so large as the bee called by the same name in America, but they could sting, and they would follow a person and keep up the fight as long as there were any of them left. I should be very sorry to have any such breed in my apiaries.

As for *Apis dorsata*, it might be brought here and tested, but I do not believe it could be crossed with our present races. It may not be generally known that they have fixed and peculiar habits, which render crossing impossible; one of these is that the queens go out to mate about sunset, and it is not an unusual thing to have the queen and drones return by twilight.

I have more hope of success with bees brought from a milder climate; the Philippine Islands might give us something better, and there is also a group of Islands lying north and east of Australia, where we might find something of value. The hotter the climate the more irritable the bees of that country, without having corresponding advantages; and it is because of this, I anticipate that bees from the islands I have mentioned, would be of a milder disposition, and would be more apt to meet our views. —*Read at the Michigan Convention.*

Profitable Bee-Keeping.

T. F. BINGHAM.

The question, "Is profitable bee-keeping a thing of the past ?" seems to indicate that the business of apiculture is not at present a paying one, but that in the past it has been remunerative.

When we call to mind the past prices of honey, and the corresponding prices of other commodities, we do not find that the relative profits have materially changed, neither that the varied changing of methods to suit the changing tastes and circumstances, have materially changed the profits of the pursuit. It is not probable that honey will be relatively lower than at present, neither that its production will relatively change as time rolls on, but there are some features in the pursuit which seem moving steadily to the front.

The mystery and superstition incident to a limited understanding of the business, appears to be clearing away; and bee-keeping, like the raising of pigs and sheep, stands out in bold relief, as a branch of domestic economy, which in the near future will represent a vast aggregate—composed of thousands of littles, each one of which has returned a better profit on the labor and capital employed, than any of the other numerous ways by which the limited farmer and mechanic thrives.

It is true that in the matter of profit, bee-keeping like other pursuits, has its up and downs, its "off years," but that does not imply or demonstrate, that the industry is likely to become less profitable in the future,than it has been in the past. The proportion of successful bee-keepers to those engaged in the business who do not make money, is greater than in most pursuits, whether mercantile or agricultural, and at present no reason presents itself to show that the same ratio may not continue.

Of course, no one supposes that a few colonies of bees will support a large family and leave a balance in the bank, neither will a small farm; but the small farm and small apiary combined,probably would.

Out-apiaries, so-called, afford practical evidence that bees in small apiaries either do better or are more conveniently handled. If such is the case, and it would be reasonable so to believe, there can be little doubt about the future.

If I have made this plain, I have shown that bee-keeping has been a profitable pursuit, and that no substantial evidence exists to prove that it will ever be less so, and apiculture, as one of the many methods of profitable and diversified industry, either on a large or limited scale, does and will continue to hold an interesting and remunerative place among other successful pursuits.—*Read at the Michigan State Convention.*

Bee-Keeping on the Minnesota Praireis.

S. B. SMITH.

When I moved to this county in 1880, the country was new, it being only about 12 years ago when the first settlers arrived here. The Winters are very severe, there being no timber to break the wind, and no flowers except the wild flowers of the prairie. I thought that bees could not live here, and at that time there were none in the neighborhood, and this confirmed me in my opinion.

After a few years, one of my neighbors bought a colony of bees which gave two swarms, stored a large quantity of honey, and wintered well. He wintered them in his cellar.

The next year another neighbor bought 2 colonies, and they also gave 2 swarms each, and in the Autumn he put them in his cellar, and 5 out of the 6 colonies wintered in good condition.

Seeing that bees could be kept on this cold, treeless prairie, I bought a colony in the Spring. They were in a 10-frame hive, with 2 empty frames. The frames were nearly full of comb, but had only a small amount of honey in them. The bees were Italians, and good workers, and I got 50 pounds of comb honey from them that Summer, but no swarm.

I had always wintered my bees on the Summer stands, but the Winters are so long and severe here, that I was afraid to winter them out-of-doors. I was also afraid to put them in my cellar, where I had vegetables, so I put them in a small, tight building that I use in Summer for a milk-house, and gave them ventilation in the top of the hive. About the middle of February, I found my bees all dead, and on examining them, I found all the comb in the center of the hive, covered with frost, and over 30 pounds of honey remaining. Will some one tell me what was the cause of my bees dying ?

There was a very large number of drones, more than I had ever seen before. Through the month of September, it seemed to me that there were more drones than workers. Was there anything wrong in this, or is there ever any danger of there being too many drones in a colony ?

My experiment in wintering bees, as above, did not prove a success, but I had obtained honey enough from them to pay for 3 colonies, so I was not discouraged.

I next bought a colony in the swarming season. I furnished a hive, and paid $4.00 for the colony. I have got them yet, and think they are cheaper at $10 than some colonies would be as a gift. I wintered them in my cellar last Winter. They gave me 2 good swarms last season, and I have put them in the cellar again this Winter, where they are wintering well so far. I put them in on Dec. 1, but it has been such a mild Winter so far, that I might have left them out-of-doors.

I bought a colony of bees last Spring in an old-fashioned box-hive, they had 3 swarms, but did not work like a strong, healthy colony. There was something wrong about them, but what, I could not tell, as I could not examine them. I let them remain on the stand until after the honey season had passed, and then smoked and examined them as well as I could, but there were but few bees to be seen. I took off one side of the hive, and found more than a pint of bees, and no queen, but about 30 pounds of honey.

I had 2 other weak colonies, which I doubled up according to the best of my ability, but being a novice in this department of apiculture, I only made a partial success of it.

Keeville, Minn.

The frost killed the bees, mentioned in the 5th paragraph. In the 9th, the colony was evidently queenless.—ED.]

Cellar vs. Out-Door Wintering.

DR. A. B. MASON.

The intelligent bee-keeper no longer dreads the cold of Winter, for the so-called wintering problem was solved years ago ; but, like other matters that to observant and thoughtful persons have become axioms, the successful wintering of bees is yet to many *the* subject that most interests them.

This subject of wintering, like that of foul-brood, seems to me to have been worn almost, if not quite, threadbare, in the bee-periodicals, and still both subjects are quite frequently placed on the programmes of bee-keepers' conventions.

Had the subject assigned me been "In-Door *vs.* Out-Door Wintering," I should probably have had nearly every one on my side, for but very few bee-keepers in the Northern part of the United States, and in Canada, who are up with the times, winter their bees out-of-doors; at least such is my impression from what I see and hear.

With some, cellar wintering has proven anything but a success. A Mr. Christiancy, of Toledo, O., who keeps from 200 to 400 colonies, said to me a few days since, "Stand by cellar wintering; its the way to winter bees." He never fails.

Not every one engaged in any kind of business is successful, and bee-keeping is not, and never will be, an exception. Certain conditions must exist and be complied with or the outcome will not be satisfactory.

Proper cellar wintering means an abundance of food, a dark, dry cellar, with a temperature of about 45°, and these conditions to be maintained from the beginning of settled cold weather in the Fall, until the beginning of settled warm weather in the Spring, or early Summer. With such conditions existing, there would be no occasion for any one saying as did Dr. Miller, at the recent Keokuk convention, "I don't know whether the greater loss in wintering out-doors....may not be made up by greater vigor, as compared with those wintered in the cellar."

Some recommend raising the temperature of the cellar as Spring approaches. I would not do so unless it could be maintained when the colonies are placed on the Summer stands. I have tried all kinds of cellars for wintering bees, and unless the cellar is dry, and I can control the temperature, I believe I should prefer to leave them on the Summer stands, and give them suitable protection. I believe that a damp cellar, at *any* temperature, is a poor place in which to attempt to winter bees.

If the generally-accepted statement is true, that it requires 25 or 30 pounds of honey to winter a colony out-doors, and it takes from 10 to 15 pounds to winter in a cellar, there is a pretty fair profit on the side of cellar wintering, in the saving of honey alone. The saving of 10 pounds of honey per colony by cellar wintering, where the apiarist has 100 colonies, means a saving of 1,000 pounds, which, at 10 cents per pound, amounts to $100, or $1 per colony. To this amount is to be added the saving of colonies, which, if left on the Summer stands, would have died of starvation, caused by the cold preventing the bees from reaching their stores.

Strange as it may seem, there are those who are opposed to cellar wintering, but are in favor of what they call winter protection, and I was amused last Winter, when this same subject was under discussion at the Brantford convention, to hear several denounce cellar wintering, and speak so highly of winter protection on the Summer stands; and I presume that I should have laughed outright, had not the "dignity that doth hedge about" a presiding officer, prevented me, when that positive, sharp, wily Englishman, known as J. B. Hall, of Woodstock, Canada, said: "Where is the man who winters his bees out-of-doors? You all talk about out-door wintering, but when it comes right down to it, if you do not put your bees into a cellar, you build a little cellar around each colony. Why not put them all into one big cellar, and done with it?" and more in the same style until he stirred up a fair-sized hornet's nest.

I have had colonies consume less than 4 pounds of stores while in the cellar, from November to April, but last Winter one colony consumed 21 pounds of stores in the cellar and then starved—a fair quantity of pollen being left, but not a drop of honey.

It seems hardly worth while to even mention the matter of expense, for putting the bees into the cellar in the Fall, and taking them out in the Spring, but this objection has been made. Comparatively, few intelligent bee-keepers, now winter their bees on the Summer stands without some kind of protection; but no kind of protection; that is worthy of the name, can be furnished as cheaply as the bees can be put in and taken out of a cellar or special repository; and those who winter without any kind of protection, do so at a greater expense than comes from any other method of wintering.—*Read at the Michigan Convention.*

Production of Extracted-Honey.

B. C. GRIFFITH.

The first thing essential to a crop of extracted-honey is a large force of young and vigorous Italian bees, at the proper time. To secure this, we must have plenty of stores when our bees go into Winter quarters, say about 25 pounds of honey, and in case they should run short before Spring opens, we must give more, to keep up brood-rearing, so that when the Spring crop of honey comes in, our hives are full to overflowing with young and vigorous bees, ready for the field at the peep of day, to bring in the nectar from each tiny flower.

Another thing essential to a crop, is a plenty of good empty combs, nice and clean, ready to receive the honey as fast as gathered.

If we leave our bees to build their combs, we are sure to loose the crop, as it is estimated that from 15 to 20 pounds of honey are consumed by bees in making one pound of comb. These combs are to be put on hives just as the flow of honey begins; this the apiarist must learn from the flowers in his locality. Keep all the colonies strong, is the watchword, if you wish to gather honey; and another thing is, to have a good queen in the colony, laying the eggs by thousands. A poor queen has a poor colony of bees, and results in no honey crop.

Extracted-honey can only be obtained from the combs by an extractor, of which there are many kinds; the object of them all is to get the honey without destroying the combs. By returning the combs we save the bees a great amount of labor, and as we stated before, considerable honey, in the construction of combs. The combs should be filled by the bees and capped. If taken from the combs before ripe, it may ferment and become vinegar, instead of honey.

Our faith in the future of extracted-honey as a staple article, like butter, eggs, or small fruits, is strong and invincible. To this we have devoted our time, energies and means, and we are fully aware that all our "earnest work," as well as that of our co-laborers, will be rewarded. Let us all be wide-awake, for the "day of prosperity," for our chosen vocation, is just dawning.

Before closing, I would say to the members of this Association, we are pursuing an honorable calling, one in which I believe God will bless us, and be a blessing to our neighbors. Surely the blessed bees go and come from our fields carrying the fertilizing pollen from blossom to blossom, doing the very thing the Great Creator intended should be done, hence you see we are blessed in two ways at least, "pure sweets" and "bountiful crops." Let each bee-keeper do all in his power lawfully to increase the crops that will yield the precious nectar, clovers, peas and buckwheat; also to protect the forest that produces nectar—poplar, persimmon and maple—of the latter three the country is being stripped.
—*Read at the North Carolina State Convention.*

Clubs of 5 New Subscriptions for $4.00, to any addresses. Ten for $7.50.

CONVENTION DIRECTORY.

Time and place of meeting.

1891.
Jan. 30.—Whiteside Co. (Ills.) at Morrison.
J. M. Burtch, Sec., Morrison, Ills.

Feb. 10, 11.—Ohio State, at Toledo, O.
Miss Dema Bennett, Sec., Bedford, O.

Feb. 11, 12.—Eastern Iowa, at Maquoketa, Iowa.
Frank Coverdale, Sec., Welton, Iowa.

May 7.—Susquehanna County, at Montrose, Pa.
H. M. Seeley, Sec., Harford, Pa.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

North American Bee-Keepers' Association

PRESIDENT—P. H. Elwood....Starkville, N. Y.
SECRETARY—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

PRESIDENT—James Heddon ..Dowagiac, Mich.
SEC'Y AND MANAGER—T. G. Newman, Chicago.

Bee and Honey Gossip.

Fastening Foundation in Frames.

Did you ever use a little roller for fastening foundation. I use a common castor out of a table, and it works well dipped in water, either hot or cold, before applying. I also use building-paper and common newspapers for covering the top of the hives, both in Winter and Summer, and find them to work well both for wintering in the cellar and on the Summer stands. I noticed that my bees lose their stings when killing drones in the Fall. THOMAS HENDERSON.
Edmonton, N. W. T., Jan. 3, 1891.

Late Fertilization of Queens.

Do queens become fertilized after laying drone eggs for some length of time? I believe I had one which did become so. I had a colony which swarmed in June and a good queen came out of it. Late in the season, noticing a great many dwarf drones flying about the old colony, I got my drone trap and caught and killed as many as I could. In November, I looked at the colony, and found that the drones were hatched in the worker-comb. I thought there must be a drone-laying queen, or a laying worker, but after a thorough search, I could find no queen, Two or three days later I looked again without success, but noticed drones and workers hatching in the same patch. The queen was still laying, and I saw 3 or 4 eggs in a cell, on the outside of the brood. A short time after, I again looked and this time found the queen. She was coal-black, with no sign of yellow, and, thinking she was worthless, I killed her. Six days afterwards, when I went to double-up this colony with another, I found sealed brood, with 3 or 4 queen cells on each side, which, when hatched, turned out to be very good queens and workers. This queen had been laying for two months after the other queens had stopped. She had undoubtedly become fertilized some time in October, as the queens hatched on the last day of November. NOBLE SHAW.

Milton, Ills.

Poor Stores.

I am a beginner, with a small apiary. In preparing my bees for winter quarters I found one colony was dead, with plenty of honey. They were crowded between a few empty frames. I noticed pools of honey (or sweet water) under one full frame, at the opposite side of the chamber from the dead bees. "What was the cause?" J. H. ANDERSON.

Montrose, Colo., Jan. 1, 1891.

[The sweet water probably became sour, after standing, and that was the cause of the death of the bees.—ED.]

Packages for Extracted-Honey.

I notice considerable discussion, in bee-periodicals, about the 60-pound tin cans for extracted-honey. My observations are that they are not the best, for they are very tender, and easily made to leak, especially if out of the cases, and nails are so apt to be driven into them through the cases. They are too frail, and not solid enough for the weight put into them. When they are leaking, it is difficult to tell where the leak is, and you cannot stop it without the tinsmith. The small kegs, holding from 75 to 150 pounds each, are the cheapest and most sensible packages for extracted-honey, for if they are leaking, the hoops can be driven up to tighten them. Another objectionable feature in the tins, is that buyers get the impression that all the honey in those cans is California honey, and are more or less prejudiced. What do other dealers say? H. R. WRIGHT.

Albany, N. Y.

Wants two Volumes a Year.

There is certainly no reader of the BEE JOURNAL who will not heartily congratulate its editor upon the great improvement he has effected in its change of form. You may remember that when its former square form was adopted, I objected on the ground that it would not be uniform with the preceding volumes. Now that it has returned to its former desirable shape as to convenience, and as it were for a text-book of reference, and as a guide in the furtherance of apiarian pursuits, I cannot see what further we could ask to make it "just the book that we want." Think of 1,664 pages for the year and all for $1.00; why! it almost takes the breath away! Will not the volume be immense! How would it do to have two volumes (with two indexs) in the year, as for instance the way *Gleanings* is published? WM. S. BARCLAY.

Beaver, Pa., Jan. 15, 1891.

[We had thought of making two volumes in the year, and may do so yet, giving an Index every 6 months. Over 800 pages will be quite large enough for a volume, and there will be two such in a year.

The reason for changing to a larger size of page, 10 years ago, was that presses were not then available, large enough to print the whole 32 pages all at once, and we could not then quite afford the extra expense of printing *two* forms every week. Now, there are several of such large printing-presses in this city, and hence the enlargement to 32 pages every week was possible.

The enlargement will even now cost $1,000 a year more than the former size, but our readers have the advantage *free*.—ED.]

Successful Bee-Keeping in Iowa.

In the Spring of 1887 I bought one colony of black bees in a box hive, for which I paid $5.00. This was the beginning of my experience with bees. This colony increased to 5 by natural swarming, which were hived in boxes like the first colony. During the Summer, the moths destroyed 1 colony, or nearly so, and I distributed what remained of it among the others in the Fall, leaving me 4 colonies which I wintered in the cellar. During the next Summer, I transferred these to movable-frame hives, and I got 3 swarms, which increased my number to 7. These I united down to 5, in the Fall, and wintered them also in the cellar. In 1889 my 5 colonies increased to 10, which I also doubled up, in the Fall, to 7, and they came out of the cellar last Spring in good condition. During the Summer of 1890 I had 5 swarms, but 2 of them united with other colonies, leaving me 10 colonies, which I now have in the cellar in fine condition. My honey crop for 1890, from 7 colonies, Spring count, is 465 pounds of comb-honey, in 1-pound sections. My 2 best colonies gave me 92 and 97 pounds, respectively. On Aug. 29, I introduced an Italian queen into one of my colonies, and she began to lay about Sept. 1. When I put the bees into Winter quarters, there were quite a number of golden Italians to be seen sporting around the entrance.

S. C. Booher.

Danbury, Iowa, Jan. 14, 1891.

* * *

White Mountain Apiarist.

I notice on page 5 that inquiry is made after several bee-periodicals that you have not received copies of lately. The "White Mountain Apiarist" was published a few times as an advertising sheet, and it was so well received that we concluded to publish it regularly, and shall begin to do so on Jan. 15. We congratulate you on the appearance of the American Bee Journal, in its new form. The change has been a success. It cannot be outdone in neatness and attractive appearance.

A. D. Ellingwood.

Berlin Falls, N. H., Jan. 2, 1891.

* * *

Letter from California.

It is some years since I have written you, although I have often during the past year, thought of sending you a few hundred words about the bee industry in this portion of California. I am moved to write at this time mainly through memories of the past, brought to mind by the receipt of the last issue (Jan. 1,) of the Bee Journal. It looks so much like what it was when I first saw it, something like 10 years ago, only it is somewhat finer, typographically. I like it very much as a well-edited bee-periodical. It could not well be better. Therefore I extend to you my hearty congratulations, as a publisher, upon the fine appearance of your weekly.

What I marvel at, is, how you can afford to give such a large magazine, nicely printed, folded, wired and trimmed for *only* $1.00 a year. I am inclined to think that you must have an interest in a paper mill, or that your advertisements bring in a big revenue, or else that your subscription list is so large that the *small* profit on each, amounts to a respectable sum in the aggregate. Be this as it may, you are giving the apiarists of this country a first-class weekly that has literary merit, and is free from a lot of "twaddle;" in short, is what one can read without feeling disgusted after perusing its pages.

To wish you continued prosperity seems needless, for it is going to come to you anyway. You have laid the foundation for success and the people, recognizing your efforts in their behalf, will come to your support. Nevertheless, I trust that the future of yourself and the Journal will be as bright as has been the past.

Of myself I shall not state much, I shall try between this and Summer to give you some random bee-notes from this part of the world that may not be uninteresting to your many readers.

For the past 4 years I have been very busy—3 years as court and criminal reporter on a large daily paper, the last year as editor, manager and part owner in a San Francisco weekly. So you see I have had little or no time to give to bees after making a round trip of 24 miles daily. My second youngest brother has been "running the bees," and, for a youngster, has done remarkably well; and so far, has made more money out of them than I did.

W. A. Pryal.

Claremont, Calif., Jan. 5, 1891.

[For the information of friend Pryal, and others, we will say that there is not one cent of profit in publishing the Bee Journal. Every dollar that it brings is expended in its publication.

When it was a monthly, 12 numbers brought $2.00; now, it takes 104 numbers to bring in $2.00 for subscriptions—with over 8 times the amount of labor and cost.

A monthly, of the present size of the Bee Journal, would only bring 12 cents a year! Competition is, therefore, quite impossible! The only profit there is, comes from the sale of Books and Supplies. In poor years, even that is infinitismal. New periodicals, if they intend to compete, really have very great difficulties to encounter.—Ed.]

Bees in the Greenhouse.

The article on page 42, on this subject, reads very well, and there is no doubt but that the bees are just the thing to fertilize the cucumbers. But if you are raising choice flowers for sale, they are an injury instead of a benefit. The worst of it is, if you own the bees, it is very expensive; for I think that not more than one-fourth ever get out to tell the story. I judge by the great number of dead bees found on the ground; the loss is so great that I have tried to shut them out, by tacking netting over the openings, which is a great bother. I would like to learn the experience of others. L. C. LINCOLN.

Greenville, Mich.

[We would like to hear from others on this subject, who may have choice flowers in greenhouses, as suggested by Mr. Lincoln. It seems, by his testimony, that the flowers of *choice* plants are not only injured by the bees, but that in turn, the bees are killed by the flowers. This is getting quite interesting, and we want to know all about it. Let all who have noticed anything of the sort, give us the facts, for publication.—ED.]

Good Yield for a Poor Season.

The past season has been a very poor one for bees in this locality. I had 10 colonies in the Spring, and the weather being unfavorable, I was obliged to feed them until June. They increased to 20 colonies, and they gathered 830 pounds of comb-honey. My bees are Carniolans.

GEORGE W. NIVER.

Bentley Creek, Pa., Jan. 17, 1891.

Bee-Keeping in Tennessee.

I would like to know how bee-keepers manage to attend to their bees when strawberries are to be gathered, and other farm work attended to, during a honey-flow. I have 40 colonies of bees, and 9 acres of strawberries, with 75 or 100 pickers to look after, besides other things. When the bees swarm, I do not know what to do, as I can get no one to handle them but myself, all are afraid of stings, and I cannot leave my other work. This troubles me more than cellar-wintering, chaff-hives, or diarrhea, because I am not bothered by such things.

Owing to the heavy rains that we had, during poplar bloom, our honey crop was very short, and I was unable to supply my customers. I sell comb-honey for 10 cents per pound, and extracted for 8⅓ cents. My bees are in good condition now, and I look forward to a good season. I grow all kinds of fruit, for bees and fruit go hand-in-hand, and all my fruit trees are in good condition.

R. H. C. MITCHELL.

Fruitland, Tenn., Jan. 15, 1891.

The Bee-Keepers' Union.

I have voted for the re-election of all the officers for the National Bee-Keepers' Union. I am well satisfied with the work done by the Union, and hope the time will come when the General Manager will be paid for his services, as he ought to be. GREEN R. SHIVER.

Greene, Iowa.

Cost of Transportation.

Can some of the readers of the BEE JOURNAL who have had experience in buying bees in the South, state the cost of express charges on a 4-frame nuclei, from Louisiana or Texas, also the charges for the transportation of a colony to Indiana or Illinois. This is something that will interest us all.

State Line, Ind. W. P. FAYLOR.

Good Honey Crop.

Last Spring I began with 5 colonies of bees, 4 Italians, and 1 hybrid, which increased to 13, by natural swarming. My first swarms issued on May 16 and 20. In June the bees were on the verge of starvation, and ceased brood-rearing. White clover did not yield nectar of any account. About the last of June the bees commenced to store surplus, and gave me 335 pounds of comb-honey in ¾-pound sections—238 pounds being secured from 2 colonies. They have plenty of honey to winter upon. I have them packed in chaff upon the Summer stands. Nearly all of the bees in this part of the country (Wayne county) are blacks, and are kept in old-fashioned box-hives. Most of my queens are mismated. D. I. WAGAR.

Flat Rock, Mich., Jan. 10, 1891.

Binders made especially for the BEE JOURNAL for 1891 are now ready for delivery, at 50 cents each, including postage. Be sure to use a Binder to keep your numbers of 1890 for reference. Binders for 1890 only cost 60 cents, and it will pay you to use them, if you do not get the volumes otherwise bound.

Wavelets of News.

Prevention of Swarming.

To regulate, and to a great extent prevent an increase by swarming, I cannot too strongly recommend the use of baits in the surplus department. There are in every apiary, sections partly-filled and uncapped. I place one or two unfilled sections in the surplus apartment, sometime before the approach of the honey-flow, or after all danger of chilling the brood, is past. By this means bees become accustomed to the surplus apartment, and need no extra coaxing, to induce them to go to work whenever there is anything to gather; very often storing honey therein before filling the brood-frames below.

I believe this plan has been recommended before, but I had no idea of its practical value until I put it into practice.

I do know, however, that bees sometimes refuse to work in Cases, provided with new sections, in which were fastened starters made from the very best material; whereas, if unfilled sections had been used, I am satisfied that the result would be different.

Some bees are like the human family—a great incentive to labor must be offered.— A. C. TYRREL, in *Apiculturist.*

Amount Needed for Winter Stores.

A large colony will consume more honey than a small one, as more mouths require more food. A mild Winter, when bees exercise freely upon the wing, make them have better appetites, than when they are in a semi-dormant condition, too sleepy to eat.

The changes in the temperature, from very cold to mild, arouses bees to greater activity than when kept at an even temperature, as they are in the cellar.

I put my lightest in the cellar, and I feel safer with 5 pounds less, when they are put in there, than upon the Summer stands. I can sleep a great deal better, whether my bees are in-doors or out, if I know that they have 30 pounds of honey rather than less. I am no advocate of short stores for any time of the year, and am always the better satisfied when I know that my bees have plenty to eat.

Food enough for Winter, in any locality, means the interim from the cessation of the honey-flow in the Fall, until it comes again in the Spring. Early in the season, there often occur a few very good honey days, and these followed by several weeks when there are none. This spurt of new honey will start brood-rearing, and if there are no stores in reserve, bees will starve.

Bees are very provident, and will not rear large families, unless they are rich enough to do so. It is poor policy to eke out Winter stores by feeding, in early Spring. In this locality, the weather is very changeable, and bees might need to be fed during stormy or windy weather, when it would be a positive injury to open the hives. I have done a great deal of feeding in early Spring, but shall do no more.—MRS. L. HARRISON, in the *Prairie Farmer.*

Perfume and Honey.

Scientists tell us that odors of flowers do not, as a general rule, exist in them as a store, or as a gland, but are developed as an exhalation. While the flower breathes it yields fragrance, but kill the flower and the fragrance ceases. It seems, then, that odors are simply exhalations dependent upon essential oils, not upon vapor impregnated with matter, and cannot, therefore, be condensed as such; and we have yet to learn that these exhalations are visible, or leave the least stains; and while it is well known that they combine with various fatty matters, they do not sensibly increase their weight or bulk. Thus, no matter how much our nice clover or linden honey may perfume the room in which it is placed, the quantity of honey is never materially less.—G. M. DOOLITTLE, in the *Rural Home.*

Inducing Bees to Enter a Hive.

If a comb covered with bees is shaken some distance from the entrance, you will notice that the first bees to enter the hive, raise their abdomens, and at once commence fanning.

If you have ever watched bees in this position, you may have noticed a small brown spot, just over the sting sac. It is from this that the young bees find their way. A strong scent is emitted from a quantity of bees in this position, and this scent, coming from under the scale, near this brown spot, is fanned back to the rear guards, and is quickly answered by a general movement toward the hive.

This also accounts for the peculiar actions a lost bee will exhibit, upon first finding the entrance. The same manœuvres will be observed when young bees are taking a flight, or as a swarm is marching into its new hive.—E. L. Pratt, in the *Apiculturist.*

Seasonable Hints.

Snow around the hives is no detriment. It is porous, and enough air can penetrate it, for ventilation, in Winter. When it forms ice at the entrance, then it must be cleaned away. An examination during and after a thaw, is very necessary.

Do not be alarmed if you find a few dead bees at the entrance of your hives. A few of them will naturally die of old age, and to have the survivors carry them out when the temperature will permit, is an indication ot vigor.

The wise bee-keeper will now lay his plans for next season's work; provide his hives, surplus boxes, frames, and, above all, inform himself as to the operations of successful bee-keeping. To do this, he should take at least one bee-paper, for in no other way can one so well inform himself as by the records of those who are making bee-culture a success. It will enable the expert to keep up with the times, and the beginner to acquaint himself with not only the necessary but the best fixtures, in order to begin intelligently, and to continue in the right direction.—Walter S. Pouder, in the *Indiana Farmer.*

Temperature of Bee-Cellars.

The temperature of bee-cellars bears such an important relation to the health of the bees, that it must be kept in mind constantly. In some bee-papers the advice is continually given, to beware of the moisture in the cellars. This has been counted as one of the most fatal conditions of such a cellar.

The moisture of the air bears an important relation to the temperature, and if the latter is kept right, no danger may be expected from the former. Moisture, of course, is continually passing off from the bees, the same as from human bodies, and this must be absorbed by the air. Should the air be saturated with moisture, so that it can contain no more, this avenue of escape of moisture, from the bees, will be closed. The air of a bee-cellar that is warm and damp would be just as injurious as a moist air without the warmth. Warm air does not thus answer the purpose.

The degree of moisture in the air should be ascertained, and a complete record of it kept every day. A wet bulb thermomter can be obtained for a small sum, and one should be kept in the bee-cellar all of the time.

It is not so much, then, the temperature of the cellar, as it is the degree of saturation. A large colony, well protected, and in good condition, can stand more moisture than a small, sickly one.

Mould in the cellar is pretty sure indication of a moisture-laden atmosphere. Its presence may not be injurious to the bees, but it indicates the beginning of conditions which may result unfavorably.

Damp cellars need not be had, for there are easy methods to prevent such conditions. One bushel of unslacked lime will absorb 21 pounds of water, in the process of slacking. If a quantity of unslacked lime is thus kept in the cellar continually, it will absorb the moisture, and will also create a very dry atmosphere.—*Practical Farmer.*

Men who Advertise and need a new idea now and then, or who have not always the time or inclination to prepare their advertisements, will find a valuable assistance in the novel book of "Ideas for Advertisers," just published by D. T. Mallett, New Haven, Conn., and sent on receipt of $1.00, postpaid. He also publishes a tasty pamphlet called "When," (price, 25 cents) a treasury of good advice to business men. Descriptive circulars of both these new books can be obtained upon request to the publisher.

Convention Notices.

☞ The Annual Meeting of the Ohio State Bee-Keepers' Association, will be held in Toledo, O., on Tuesday and Wednesday, Feb. 10 and 11, 1891. Full particulars as to railroad and hotel rates, and place of meeting, will be given later. Let all interested in bee-keeping make an extra effort to be present on this occasion.

Miss Dema Bennett, Sec., Bedford, O.
Dr. A. B. Mason, Pres.

☞ The Convention of the Eastern Iowa Bee-Keepers, will be held in the Dobson Town Clock Building, at Maquoketa, Iowa, Feb. 11, 12.

Frank Coverdale, Sec., Welton, Iowa.

☞ The 8th semi-annual meeting of the Susquehanna County Bee-Keepers' Association will be held at Montrose, Pa., on Thursday, May 7, 1891.

H. M. Seeley, Sec., Harford, Pa.

☞ The Northeastern Michigan Bee-Keepers' Convention will hold its annual meeting on Wednesday, Feb. 4, 1891, at the Commercial House, in Port Huron. W. Z. Hutchinson, Sec.

☞ The bee-keepers of Whiteside County (Ills.) are requested to meet in convention in Morrison, on Friday, Jan 30, 1891, at the office of J. M. Burtch, for the purpose of re-organizing the Rock River Bee-Keepers' Association, and for the benefit of the bee-keeping fraternity. All are invited to attend who feel an interest in apiculture.

J. M. Burtch, Sec., Morrison, Ills.
E. P. Gibbs, Pres.

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ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

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ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

☞ Subscribers who do not receive their papers promptly, should notify us at once.

☞ Send us *one new* subscription, with $1.00, and we will present you with a nice Pocket Dictionary.

☞ The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to pay for another year.

☞ Systematic work in the Apiary will pay. Use the Apiary Register. Its cost is trifling. Prices:

For	50 colonies (120 pages)	$1 00
"	100 colonies (220 pages)	1 25
"	200 colonies (420 pages)	1 50

☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

Our Sewing Machine.—One who has purchased a Sewing Machine of us, as advertised on page 382, volunteers this statement:

> I am well pleased with the Sewing Machine you sent me; any persons wanting a good Sewing Machine, one that is equal to the high-priced machines which are sold by agents, can do no better than to send for your $15.00 Machine. They will be agreeably surprised when they see it. Mine is really better than I expected.
> W. J. PATTERSON.
> Sullivan, Ills., Dec. 5, 1890.

Clover Seed.—White Clover Seed has declined, and Alsike has advanced. The price of either seed will be 25 cents per pound; $2.50 per peck; and $9.00 per bushel, until further notice.

The "Farm-Poultry" is a 20-page monthly, published in Boston, at 50 cents per year. It is issued with a colored cover and is finely illustrated throughout.

We have arranged to club the AMERICAN BEE JOURNAL with the *Farm-Poultry* at $1.35 per year for the two. Or with the ILLUSTRATED HOME JOURNAL at $1.75.

A Word of commendation from our readers to those not among our subscribers, will be more potent than anything we can say. If you like our JOURNAL—please let your neighbor know it, and let us thank you in advance for this favor.

Look Over the numbers of 1890, and if any are missing, send for them at once—before all are gone.

Supply Dealers should write to us for wholesale terms and cut for Hasting's Perfection Feeders.

Catarrh, Catarrhal Deafness, Hay-Fever—A new home treatment whereby the worst cases of these hitherto incurable diseases are permanently cured by a few simple applications made once in two weeks by the patient at home. A circular describing the new treatment is sent to any applicant free on receipt of stamp to pay postage by A. H. Dixon & Son, sole proprietors, 345 West King Street, Toronto, Canada. 49A 12Mtf

CLUBBING LIST.

We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

	Price of both.	*Club.*
The American Bee Journal	$1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Guide	1 50	1 40
Bee-Keepers' Review	2 00	1 75
The Apiculturist	1 75	1 65
Bee-Keepers' Advance	1 50	1 40
Canadian Bee Journal	2 00	1 80
American Bee-Keeper	1 50	1 40
The 8 above-named papers	5 75	5 00
and Langstroth Revised (Dadant)	3 00	2 75
Cook's Manual (1887 edition)	2 25	2 00
Quinby's New Bee-Keeping	2 50	2 25
Doolittle on Queen-Rearing	2 00	1 75
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 60	1 50
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	2 20
Western World Guide	1 50	1 30
Heddon's book, "Success,"	1 50	1 40
A Year Among the Bees	1 50	1 35
Convention Hand-Book	1 50	1 30
Weekly Inter-Ocean	2 00	1 75
Toronto Globe (weekly)	2 00	1 70
History of National Society	1 50	1 25
American Poultry Journal	2 25	1 50
The Lever (Temperance)	2 00	1 75
Orange Judd Farmer	2 00	1 65
Farm, Field and Stockman	2 00	1 65
Prairie Farmer	2 00	1 65
Illustrated Home Journal	1 50	1 35
American Garden	2 50	2 00
Rural New Yorker	2 50	2 00

Do not send to us for sample copies of any other papers. Send for such to the publishers of the papers you want.

We send both the Home Journal and Bee Journal for 1891, for $1.35.

All Who Subscribe for the AMERICAN BEE JOURNAL can hereafter have our ILLUSTRATED HOME JOURNAL also, from the time their subscriptions are received to Jan. 1. 1892—both papers for only **$1.35.** We can also furnish *Gleanings in Bee-Culture* for same time with the above, for **$2.15** for all three periodicals This is an offer that should be accepted by all who keep bees, and desire the regular visits of these standard publications—all three periodicals from now to Jan. 1, 1892, for the price named.

HONEY AND BEESWAX MARKET.

DETROIT, Jan. 17.—Comb Honey is quoted at 15@17c. White Clover quite scarce. Extracted, 7@8c. Beeswax, 26@27c.
M. H. HUNT, Bell Branch, Mich.

NEW YORK, Jan. 17.—Market is very quiet, especially on comb honey. We quote: Fancy white 1-lbs., 15@16c; 2-lbs., 13@14c; off-grades, 1-lbs., 13@14c; 2-lbs., 12c; buckwheat, 1-lbs., 11@12c; 2-lbs., 10c. Extracted, basswood and white clover, 8@8½c; buckwheat, 6½@7c; California, 6¾@7¼c; Southern, 65@70c per gallon. Beeswax, 25@27c.
HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

KANSAS CITY, Jan. 17.—Honey is very slow sale, both comb and extracted. We quote white 1-lb. comb, 16@18c; dark, 12@13c; white, 2-lb., 14@15c; dark, 11@12c; extracted, 6@7c. Beeswax, 25c.
CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CINCINNATI, Jan. 18.—Demand is good for all kinds of extracted honey, with a full supply on the market of all but Southern, which is scarce. It brings 6@8c per pound. Demand is fair for choice comb honey, which we hold at 18@20c, in the jobbing way.

Beeswax is in good demand at 24@26c., for good to choice-yellow. C. F. MUTH & SON,
Corner Freeman & Central Aves.

CHICAGO, Jan. 17.—Demand at present not very active on comb honey. Fancy white, 18c; white, 17c; white 2-lb. sections, 15c; buckwheat, 1-lb. sections, 13c; extracted, 7@9c. Beeswax, 28c.
S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, Jan. 18.—Fancy white 1-lb. comb, 18c; fair to good, 17c; dark 1-lb., 14@15c; 2-lb. white comb, 15@16c; 2-lb. dark, 13@14c; extracted, white, 7c; dark, 5@6c.
HAMBLIN & BEARSS, 514 Walnut St.

CHICAGO, Jan. 19.—There is not the volume of trade usual at this season, yet prices are without material change since last quotations. Best lots of white honey in 1-pound sections, brings 17@18c; brown and dark, slow, at uncertain prices. Extracted, 7@8c per pound. Our stock is light, as to quantity, but is kept well up to demand by daily receipts. Beeswax, 27@28c.
R. A. BURNETT, 161 S. Water St.

DENVER, COLO., Jan. 16.—First grade 1-lb. sections, 16@18c. Supply exceeds the demand at present. Beeswax, 25@28c.
J. M. CLARK COM. CO., 1517 Blake St.

BOSTON, Jan. 9.—While honey is selling slowly, prices are being well maintained, and the supply will be entirely exhausted before the first day of March. Best 1-lb. comb-honey is selling at 19@20c ; fair to good, 18@19c. There are no 2-lb.sections on hand. Extracted, 7½@9c. There is no beeswax on hand.
BLAKE & RIPLEY, 57 Chatham Street.

ALBANY, N.Y., Jan. 17, 1890.—The honey market is quiet and steady, with light stocks of any kind or grade. We are selling white at 15@18c; mixed, 14@15c; dark, 12@14c. Extracted, white, 9@10c; mixed, 6@8c ; dark, 6@7c.
H. R. WRIGHT, 326-328 Broadway.

Supply Dealers, before issuing their Catalogues for next season, should write to us for terms on the Globe Bee-Veil. We have sold over 1,200 within the past year. They give universal satisfaction

Dobbins' Electric Soap

THE BEST FAMILY SOAP —IN THE WORLD.—

It is Strictly Pure. Uniform in Quality.

THE original formula for which we paid $50,000 *twenty years ago* has never been modified or changed in the slightest. **This soap is identical in quality to-day with that made twenty years ago.**

IT contains **nothing that can injure the finest fabric.** It brightens colors and bleaches whites.

IT washes flannels and blankets as no other soap in the world does—without shrinking—leaving them soft and white and like new.

READ THIS TWICE

THERE is a **great saving** of time, of labor, of soap, of fuel, and of the fabric, where Dobbins' Electric Soap is used **according to directions.**

O**NE trial** will demonstrate its great merit. It will pay you to make that trial.

LIKE all **best things,** it is extensively imitated and counterfeited.

Beware of Imitations.

INSIST upon **Dobbins'** Electric. Don't take Magnetic, Electro-Magic, Philadelphia Electric, or any other fraud, simply because it is cheap. They will ruin clothes, and are dear at any price. Ask for

DOBBINS' ELECTRIC

and take no other. Nearly every grocer from Maine to Mexico keeps it in stock. If yours hasn't it, he will order from his nearest wholesale grocer.

READ carefully the inside wrapper around each bar, and be careful to **follow directions** on each outside wrapper. You **cannot afford** to wait longer before trying for yourself this old, reliable, and truly wonderful

Dobbins' Electric Soap.

BEES AND HONEY

The Dovetailed **Strongest, Best** and **Cheapest BEE-HIVE** for all purposes. Pleases everybody. Send your address to the **Largest Bee-Hive Factory in the World** for sample copy of **Gleanings in Bee Culture** (a $1 illustrated semi-monthly), and a 44 p. illustrated catalogue of **Bee-Keepers' Supplies.** Our **A B C of Bee Culture** is a cyclopedia of 400 pp., 6x10, and 300 cuts. Price in cloth, $1.25. ☞ *Mention this paper.* **A. I. ROOT, Medina, O.**

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BOOKS WORTH THEIR WEIGHT IN GOLD!

BY MAIL POSTAGE PAID AT THE FOLLOWING PRICES:

Ladies Guide to Fancy Work, Illustrated,	$ .25
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AS PRACTICALLY APPLIED;

Being a Method by which **the very best of Queen-Bees** are reared in perfect accord with Nature's Way; by

G. M. DOOLITTLE.

In this book the author details the results of his Experiments in Rearing Queen-Bees for the past four or five years, and is the first to present his discoveries to the World.

Bound in Cloth—176 pages—**Price, $1.00,** postpaid; or, it will be Clubbed with the American Bee Journal one year, for $1 75—with the Illustrated Home Journal, for $1.25; or the two Journals and the Book for $2.00.

THOS. G. NEWMAN & SON,
246 East Madison Street CHICAGO, ILL.

BEE-KEEPERS' SUPPLIES!

WE are prepared to furnish to Bee-Keepers all kinds of Supplies promptly, and at lowest rates. Correspondence solicited and estimates gladly furnished. Our goods are all made of the best material and are FIRST-CLASS in every respect. Catalogues and Price-Lists free. Reference—First Nat'l Bank, this place.

Address, **WM. McCUNE & CO.,**
43D1y STERLING, ILL.

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FOUNDATION **And Sections** are my Specialties. No.1 V-groove Sections at $3.00 per thousand. Special prices to dealers. Send for free Price-list of everything needed in the Apiary.
1Dtf M. H. HUNT, Bell Branch, Mich.

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SECTIONS, $3 per 1,000. Foundation, 45 cts. per pound. Chaff-Hives, $1.25 each. Simplicity Hives, 90c each. Dovetailed Hives, 80c each, and everything needed in the Apiary cheap. Send for illustrated Price-list for 1891, free. "How I Produce Comb-Honey," by mail, 5c. Third edition just out.

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A PERSON OF MEANS to establish an Apiary, Small Fruit and Poultry Farm, by a homely man that has some experience at the business; or to work for some one that needs help, in shop or out. (Single man.)

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THE AMERICAN BEE JOURNAL CIRCULATES ALL OVER THE WORLD
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVII. Feb. 5, 1891. No. 6.

Editorial Buzzings.

Christmas and New Year's day came on Thursday this year. An old rhyme about Christmas falling on that day, reads thus:

> "If Christmas Day on Thursday be,
> A windy winter ye shall see;
> Wintry weather in each week,
> And hard tempests strong and thick.
> The summer shall be good and dry,
> Corn and beasts shall multiply.
> The year is good for lands to till,
> For bees to swarm and hives to fill!"

◆

Dr. C. C. Miller has been on the "sick list" for a couple of weeks. At last accounts he was better, but his intended trip to Chicago to talk over the State Association matter, had to be postponed. We hope he will soon be "on deck" again.

◆

E. A. Baldwin, of West Upton, Mass., has sent us his "Automatic Foundation-Holding Frame." The top-bar has a slit in it, and the bottom-bar has a groove. The foundation is intended to be slid down through the top-bar, and rest in the slit of the bottom-bar.

◆

A Trade-Mark to be adopted by the Union, as suggested by President Heddon, in our last issue, receives the endorsement of Mr. C. A. Hatch, President of the Wisconsin State Bee-Keepers' Association.

◆

Last Season a Colorado bee-keeper is said to have had as a honey crop from alfalfa, a ton of honey per week, for several weeks, from 210 colonies of bees.

◆

There is a Secret Pleasure in hearing ourselves praised; but on such occasions a worthy mind will rather resolve to merit the praise, than to be puffed up with it.

◆

North American Association.—A. N. Draper has been added to the Life Membership list of the North American Bee-Keepers' Association. Who will be the next? We want 49 more. The Colorado State Bee-Keepers' Association is the latest affiliation. The Ontario Bee-Keepers' Association has voted to continue in affiliation. We hope to report many more affiliations very soon.

◆

Mr. Grubb, of Nebraska, has obtained a patent on a comb-frame for bee-hives. It consists of a deep top-bar slit in the center to receive the comb foundation, and then tacking on a small piece of wood on the outer side of the foundation. There was absolutely nothing to patent—the same having been in use for years. The would-be inventor has only his pains for his pay.

◆

The Programme of the Vermont Convention came too late for insertion in last week's JOURNAL. Now it is too late.

◆

The Pictures in "Frank Leslie's Illustrated Newspaper" this week comprise scenes from the Indian conflict, scenes on the Brooklyn Bridge on a Winter's day, and a multitude of other contemporaneous scenes and incidents.

National Bee-Keepers' Union.

The votes for officers for the present year are all in and counted. The members seem to have implicit confidence in the management of the Union, and so for the sixth time have elected the same officers by large majorities.

This has not been done by any scheming or wire-pulling—for there has been absolutely none. It is the spontaneous manifestation of approval, coming in the form of "Well Done; good and faithful servants." The expressions of the members, when sending their ballots, have been exceedingly complimentary to the General Manager, who has again received every vote but one, for that very responsible position. Coming at it does, in that unanimous manner, he cannot refuse to accept the position, though he would have been very glad to have welcomed some energetic and reliable person as his successor—for it requires much time and energy to attend to the duties promptly and efficiently. However, as the ballots again demand this sacrifice, the General Manager bows to the inevitable, and will do his best to sustain the reputation, and endeavor to lead the Union to even greater victories than have heretofore perched upon its banner.

The ballots returned up to Jan. 31, 1891, give the following votes for officers:

For President—James Heddon, 175; scattering, 34.

For Vice-Presidents—Prof. A. J. Cook, 187; G. M. Doolittle, 186; A. I. Root, 186; Dr. C. C. Miller, 185; G. W. Demaree, 175; scattering, 78.

For General Manager, Secretary and Treasurer—Thomas G. Newman, 220; Dr. C. C. Miller, 1. The ballots of 12 members contained no vote for any officer but General Manager.

The ballots are filed away, and may be examined at any moment by the officers or members of the Union, or any others who may be interested.

Mrs. L. Harrison, in last week's *Prairie Farmer*, where she has ably conducted a Bee-Department for many years, has this to say about the Union. It is written in her inimical style, and shows her appreciation of the Union's grand victories in the different parts of the country. Here is the article.

Some persons have an idea that bees do not pay for what they get—are freebooters, pillaging on the people at large; and that hives are merely store-houses for stolen goods; that bees steal the sweets from clover, thereby injuring it for hay, by depriving it of its sweetness; and their owner, in turn, stealing it away from them; so that bee-keeping is a sort of thieving-business, all around.

This idea gained ground, until a cry was set up that bee-keeping was a nuisance, and it echoed from hill to hill, from village to village, and from town to town, until it threatened the very life of the pursuit. Thomas G. Newman, of Chicago, "smelled the battle afar off," and issued a call for volunteers in its defense, enrolling them all under the banner of the "National Bee-Keepers' Union."

This able general and "manager" has led forth his forces into many hotly-contested battles, in different States, and returned from the field with victory perched upon that banner, and to the sound of martial music, "Hail to the Chief."

The Union is now six years old, and defended its first case in Wisconsin, when Judge Clementson remarked: "This case involves new points of law, upon which there are no rulings of the Supreme Court. We have no law upon which to instruct a jury."

Since then "law" has been made, sufficient for all reasonable purposes, and the most fertile place of its growth was in Arkadelphia, Ark. That town arrested a bee-keeper, imprisoned and fined him, and removed his bees from its limits; his case was appealed to the Circuit Court, and from there to the Supreme Court. The best legal talent was employed by the Union, and the result was that the Supreme Court decided that the city ordinance against bee-keeping was "illegal and void," and that the keeping of bees was *not a nuisance*.

All the late cases against bee-keepers have been killed by reading the decision of the Supreme Court of Arkansas. That decision will do more to guarantee to bee-keepers their rights and privileges, than anything ever before achieved.

The Manager, with his eagle eye, and glass in hand, scans the horizon, and detects the first appearance of danger to the interests of bee-culture. Editors of newspapers have learned to respect him, and gladly retract their falsehoods with reference to the manufacture of comb-honey—at his command.

While Sister Harrison, in her characteristic manner, may have given to the General Manager too much credit, and rather lost sight of the very able Advisory Board (all the other officers), still we feel certain that her remarks will be read with more than ordinary interest.

It is very difficult to understand *why* there are not at least ten thousand members to the Union, for it has already done more *real service* to the pursuit than any organization of bee-keepers that ever existed. What it will do in the future can only be measured by the numerical size of its membership. Let us try to make it ten thousand this year.

* * *

That "Trade-Mark" is calling out quite a number of articles, and since it has been suggested that the National Bee-Keepers' Union should take hold of the matter, its friends are canvassing the subject pretty thoroughly. One of the first who joined the Union writes the following in a *private* letter to us. As his ideas are worth a consideration, we give them here, but withhold the author's name because they were not written for publication, and, in fact, were marked "Private." He says:

In the matter of "Trade-marks," Bro. Heddon is enthusiastic. Yea! eloquent in his idea of "whipping the d——l around the stump," as they say; but he does not quite hit the nail on the head. A "Mark" of some kind may be taken (a "label" if you please) to prove membership in the Union, but will the Union *warrant* that every member sells nothing but pure honey? Would not one sale of poor honey "spoil the whole?" Now, I do not see, first, how a "Trade-Mark" can be obtained from the "Patent-Office" for the Union. I cannot see how a private trade-mark can be a Union mark; and, again, I cannot see how the Union can "back up" or warrant any member. We know there are black sheep, and that there may be some in the "Union."

In fact, Brother Newman, I do not see how a "Trade-Mark" can help us as a Union; but I can see how it may hurt us awfully. My idea then is, to let the Union stand as it has—a bulwark of defence for its persecuted members, but not as an advertising scheme for any of them. Let each honey-producer stand on his own reputation, which he can make good or bad; for "by his fruits shall you know him."

* * *

The Southwestern Wisconsin Bee-Keepers' Association will hold its next convention in the Court House at Lancaster, Grant county, Wis., on March 25 and 26, 1891. All who are interested in bee-culture and convention-work are cordially invited to attend. The topics for essays and discussions are—

Spring dwindling and its cure—Edwin Pike, Boscobel.

Bee-enemies, and how to avoid them—N. E. France, Platteville.

Foul-brood and its cure—N. E. France.

What are the most destructive birds that kill bees?—Edwin Pike, Boscobel.

Queen introducing and rearing—A. E. Coolie, Mt. Hope.

What is the best way to ventilate a cellar for bees to winter in?—H. Evans, Wauzeka.

How shall our members manage to sell our honey crop to the best advantage?—Edwin Pike, Boscobel.

Does it injure a queen to have her wings clipped?—M. M. Rice, Marion.

Which will produce the most honey—a colony allowed to swarm (counting in the work of the swarm), or one kept from swarming?—Delos Ricks, Boscobel.

Which is the most profitable way for increase, by artificial swarming, or by natural swarming?—M. M. Rice, Marion.

Robbing, its cause and cure—H. Gilmore, Georgetown.

Is it profitable for a farmer to keep bees?—E. S. Morse, Fennimore.

Location of an apiary and stands, tools, etc.—B. E. Rice, Boscobel.

Other occupations for bee-keepers, which pay well, to combine with it?—Mr. Prideaux, Bloomington.

EDWIN PIKE, *Pres.*
BENJ. E. RICE, *Sec.*

* * *

☞ The *Bee-Keepers' Advance* is dead. Its subscription list has been purchased by the *American Bee-Keeper.*

Do Bees Make Honey?—We say, most emphatically, NO. There is no chemical change made in the nectar from the time it is gathered by the bee until deposited in the cell. Of course the bees evaporate the water from the nectar, or ripen it, but it is in the combs precisely what it was in the flowers, or what it might have been before they carried it to the hive, deposited it there and sealed it over. In this view we are ably supported by our friend A. I. Root, in a late issue of *Gleanings*. He says:

> We may safely say that there is practically no difference or change. There are some scientists and professors who insist that the bees do change the nectar in carrying it from the flowers to the hives, enough so that it can be detected by the chemist. In order to get unfinished sections filled up at the end of the sesson, we have fed to the bees different kinds of honey; but after being sealed up in the comb, it was exactly the same honey to all appearances.
>
> By accident, we scorched one lot a little, and hoped that the bees in their manipulation might remove the slightly-burned taste. They did not, however, change it a particle.
>
> Again, we once had a lot of honey that candied so readily, that we could scarcely keep it in liquid form at all. We melted it, added some water, and fed it to the bees. They evaporated the water added, placed it in their combs, and sealed it up, but it candied, after being sealed up in the combs, just as it did before we fed it to them; and I have never been able to detect that they improved poor honey in any way; neither have I been able to detect that any injury was done; or, in fact, that any change, perceptible to our senses, was wrought by any of their manipulations.

We Begin all new subscriptions with the year 1891, unless otherwise ordered. Almost all want the numbers to complete the volume for the year; but if any prefer to begin with the current month, it will be so done when requested. We shall try to accommodate all, as far as we can.

Supply Dealers should write to us for wholesale terms and cut for Hastings' Perfection Feeders.

In Order to do business in these days, it is very essential to advertise what is offered for sale. The Cincinnati, Ohio, *Commercial Gazette* puts it this light:

> Why fill a store with goods, and then keep dark about it? It costs money every day and every hour to carry a stock of goods. Let the public know what you have to sell. Interest the people — attract them — do not allow them to forget you or your crowded shelves. Turn on the lights, especially the brilliant, steady, and far-reaching light of advertising.

Those who have anything to sell to bee-keepers must let it be known in the periodicals that go to their houses, and are faithfully read by them. The AMERICAN BEE JOURNAL is read and re-read by thousands every week, and then kept for reference. An advertisement in its columns is therefore exceedingly valuable to those having anything to sell to its readers.

Bee-Keeping for Profit, by Dr. G. L. Tinker, is a new 50-page pamphlet, which details fully the author's new system of bee-management in producing comb and extracted honey, and the construction of the hive best adapted to it—his "Nonpareil." The book can be had at this office for 25c.

Only a Few complete volumes for 1890 are on hand. If any one desires to have a full set of numbers for binding, they should be sent for soon.

Convention Notices.

☞ The Annual Meeting of the Ohio State Bee-Keepers' Association, will be held in Toledo, O., on Tuesday and Wednesday, Feb. 10 and 11, 1891. Full particulars as to railroad and hotel rates, and place of meeting, will be given later. Let all interested in bee-keeping make an extra effort to be present on this occasion.

MISS DEMA BENNETT, Sec., Bedford, O.
DR. A. B. MASON, Pres.

☞ The Convention of the Eastern Iowa Bee-Keepers, will be held in the Dobson Town Clock Building, at Maquoketa, Iowa, Feb. 11, 12.

FRANK COVERDALE, Sec., Welton, Iowa.

☞ The 8th semi-annual meeting of the Susquehanna County Bee-Keepers' Association will be held at Montrose, Pa., on Thursday, May 7, 1891.

H. M. SEELEY, Sec., Harford, Pa.

☞ The Northeastern Michigan Bee-Keepers' Convention will hold its annual meeting on Wednesday, Feb. 4, 1891. at the Commercial House, in Port Huron. W. Z. HUTCHINSON, Sec.

Queries and Replies.

Fermentation of Comb-Honey.

QUERY 751.—My honey-house is made entirely of wood, with floor quite up from the ground. It has side-shelves on which to store the honey in crates, made of slats, to secure thorough ventilation; yet with the best care I can bestow, I find over 300 pounds of my gilt-edged honey spoiled for the market, by fermentation. In lifting the honey from the hives, in July, I found the same state of things on some of the strongest colonies. Why is this, and whence comes this damaging condition ?—Ohio.

I do not know.—H. D. CUTTING.

I simply do not know.—J. M. HAMBAUGH.

I give it up. Without knowing anything more about it, I should suspect the source of the honey.—C. C. MILLER.

Your honey-house certainly lacks sufficient ventilation, and accumulates too much dampness.—P. L. VIALLON.

I cannot tell at this distance, unless the sections had comb in them, kept over from last year.—R. L. TAYLOR.

Quite likely the trouble was more with the prior quality, or watery condition of the honey than with the house.—J. P. H. BROWN.

It is evidently in the season, both as regards the nectar-secretion and the condition of the atmosphere on the honey, direct.—JAMES HEDDON.

On account of dampness. Formerly I had much trouble in this way. A hot, dry and airy place suits honey the best. —MRS. L. HARRISON.

Dampness, I suppose. I presume a little fire in the honey-house, occasionally, would have been a good thing; or, perhaps, the ventilation is not perfect.—EUGENE SECOR.

The honey was harvested very fast and sealed before it was ripe. This happens in some seasons, when the honey is very watery during harvest.—DADANT & SON.

The room was too cool and damp. If the honey had remained longer on the hives it would have been less likely to ferment, though, possibly, it would have been soiled some by the bees.—A. J. COOK.

Who can tell? I cannot, from the data given. As a "Yankee" I could guess; but the guess would be a guess only, and the chances are that it would be wrong.—J. E. POND.

Your honey-room is not warm enough. Keep the temperature from 85° to 100° by artificial heat or otherwise. The honey on your hives did not ferment, but was capped "watery" by the bees.—G. M. DOOLITTLE.

I believe it to be due to the very damp weather we had in Ohio all through the season. A stove should have been put into the honey-house, to be fired up, on damp days. If the honey-house had been kept dry and well ventilated, no honey would have spoiled in it.—G. L. TINKER.

Your honey-house is probably all right, and the trouble is with the honey. In wet weather, the honey gathered is quite thin, and the bees often cap it when it will not keep. If such honey is stored in fully-drawn combs, it is much more liable to spoil, and the bees themselves cannot prevent it.—C. H. DIBBERN.

Unless I had a more perfect knowledge of the facts, I could not answer. I *guess* that your hives were not sufficiently ventilated, and that the honey, when sealed, was thin. Ventilation in the top of the hive, above the sections, improves the quality of the honey more than any one, who has not tried it, can imagine. —M. MAHIN.

I have noticed for a number of years that the state of the atmosphere at the time the honey is being gathered and cured by the bees, has much to do with the quality of the honey. I can tell, the minute the uncapping knife opens the cells, if any fermentation is present. If, when the cells are exposed, little bead-like bubbles are visible to the eye, there is more or less of the fermentation present, and the honey should be kept by itself. In the past season I had about 100 pounds of honey, including two section-cases of comb, that showed slight fermentation when taken from the hives and tested. Fortunately it is a rare occurrence, for there is no remedy for it. Whether the fermentation in such cases begins while the nectar is exposed to the atmosphere in the tubes of the flowers, or after the bees have collected and stored it in the combs, will probably never be known. According to my experience, honey of good quality, free from fermentation when taken from the hive, will not spoil when kept in a place like that described by the querist, though the comb may condense moisture, or "sweat," as we express it, and damage in appearance, for want of proper ventilation.—G. W. Demaree.

The exceedingly damp weather which prevailed in your locality last season is probably the cause of the fermentation. The honey having been sealed over before the water was properly evaporated by the bees.—The Editor.

* * *

Rates for the Ohio Convention.

Dr. A. B. Mason writes us that "the Central Traffic Association has gone back on reduced railroad rates in Indiana." Let it be distinctly understood that the following notice refers to Ohio only; except the paragraph which refers to Michigan, where a rate of 2 cents per mile can be had, as stated. Here is the correct notice:

A one-and-one-third rate of fare has been secured for the round trip on all railroads in the State of Ohio, to attend the meeting of the Ohio State Bee-Keepers, to be held in Toledo, at the Merchants' Hotel, on St. Clair street, on Feb. 10 and 11. Rates at good hotels are from one dollar up.

In order to secure reduced rates of fare, buy certificates of your railroad station-agent, to attend the "Ohio Republican League Convention and Banquet," and I will fix them, so that they will be good for one-third return fare. Certificates can be bought on Feb. 10, 11 and 12, and will be good for return up to, and including Feb. 14.

For parties coming from Michigan, the fare is two cents a mile each way, when parties of ten or more come and return together, on one ticket, which must be bought as above, for "Ohio Republican League Convention and Banquet." Write me for any further information that may be desired.

A. B. Mason, *President,*
Ohio State Bee-Keepers' Association.

The following is a digest of the Programme of the Convention:

Tuesday, Feb. 10, 9:00 a.m.—Convention called to order by the President. Routine business.

10:00.—How can this Convention be made interesting and profitable?

11:00.—The relation of honey-eating to longevity.—E. E. Hasty, Richards, O.

1:30 p.m.—President's address.—Dr. A. B. Mason, Auburndale, O.

2:10.—Bee-laws.—Dr. C. C. Miller.

3:00.—Getting used to a thing.—E. R. Root, Medina, O.

7:00 p.m.—The principal cause of the failure of the honey-crop in my neighborhood in 1890.—C. F. Muth, Cincinnati, O.

8:00.—How can honey-producers best reach the trade? or, do we need a Union Trade-Mark?—Miss Bennett, Bedford, O.

Feb. 11.—Queen-Rearing, Dr. Tinker.

9;40—Spacing Frames—J. B. Hains.

11:00—Freight Classification for Bee-Keepers.—J. T. Calvert, Medina. O.

11-30—Advantages of using Foundation—W. Z. Hutchinson. Flint, Mich.

1:30—Moving Bees to catch the Honey flow—H. R. Boardman, E. Townsend, O.

* * *

In Accordance with our suggestion, on page 109, the *American Bee-Keeper* will not repeat that offer of a "discount on the first order for goods" sent to its advertisers. Its editor assures us that its effect was not duly considered, and that calling itself a "bee-journal" was an inadvertance, without any intention of appropriating the name by which for 30 years this periodical has been known. We cheerfully accept the explanation and hope that the new bee-periodical may be prosperous and useful to the pursuit.

* * *

Catalogues and Price-Lists for 1891 are received as follows:

J. Stauffer & Sons, Napanee, Ind.—16 pages—Bee-Hives, Sections, etc.

Colwick & Colwick. Norse, Texas—8 pages—Bees and Queens.

J. Van Deusen & Sons, Sprout Brook, N. Y.—4 pages—Flat-Bottom Comb Foundation, etc.

J. P. Moore, Morgan, Ky.—4 pages—Italian Bees and Queens.

Rev. A. R. Seaman, Connellsville, Pa.—2 pages—Common-Sense Extractor.

D. A. Jones & Co., Ld., Beeton, Ont.—24 pages—Bee-Keepers' Supplies.

Christian Weckesser, Niagara Falls, N.Y.—28 pages—Seeds, Bees & Queens.

W. D. Soper, Jackson, Mich.—20 pages—Bee-Keepers' Supplies.

Gregory & Son, Marblehead, Mass.—60 pages—Vegetable and Flower Seeds.

* * *

A Nice Pocket Dictionary will be given as a premium for only **one new** subscriber to this Journal, with $1.00. It is a splendid little Dictionary—just right for the pocket. Price, **25 cents.**

Topics of Interest.

Ontario Bee-Keepers' Convention.

The first session was called to order by President Allen Pringle, in the Court House, St. Catharines, at 3 p.m., on Jan. 7, 1891, with about 60 bee-keepers present. Owing to the duties of the auditors not being completed at the specified time, the regular programme was not proceeded with, and an informal meeting was held for half an hour. The President called for questions.

PARIS-GREEN ON POTATOES.

F. A. Gemmell wished to know which was the most injurious, the sprinkling of Paris-green on potato-vines or on the fruit bloom. He had noticed a statement in the *Canadian Bee Journal* to the effect that more bees were destroyed by partaking of Paris-green on potato-vines, than from the other source, and he wished to know if any one had ever seen bees at work on potato-vines?

W. J. Brown had never seen them.

J. B. Hall had seen them frequently gathering dew off the potato-plants.

J. G. Gray—If it once dries on the leaf, the bees will chew the leaf.

J. B. Hall—The dew moistens it.

The President—Spraying fruit trees should be done when the bees will not be injured—*just after the blossoms drop off*. To have its legitimate effect in preserving the fruit, it must be put on just as the bloom is over. He had never seen bees sipping it off potato-vines.

Mr. Shantz—At a meeting of the Fruit-Growers' Association the other day, Mr. Beadle said that spraying should be done just *before* the fruit bloom.

The President—There is certainly some misunderstanding there.

J. K. Darling—The spraying should be done just after the petals fall—when the insect deposits its eggs there. If done at this time, no harm will result to the bees.

ROUTINE BUSINESS.

The Secretary and Treasurer having come in while this discussion was in progress, the formal business of the Association was taken up.

The minutes of the former meeting were read and confirmed, when followed

THE DIRECTOR'S REPORT.

The Board of Directors beg to report: During the year there have been three meetings of Directors—the first at Belleville, immediately following the last annual meeting, for the purpose of appointing the officers and committees, and to arrange for a premium to be given to members of the Association for the year 1890, which, as you are all aware, was a No. 2 smoker, supplied by the D. A. Jones Company.

The President, Secretary and Treasurer were appointed an Executive Committee, and they gave grants to the Toronto Industrial Exhibition ($20), and to the Western Fair Association ($10), to be expended in prizes for honey, etc., and arranged the programme for the present meeting.

Mr. McKnight and Mr. Emigh were appointed as the representatives of this Association on the Board of the Toronto Industrial Association.

Mr. Gemmell represented this Association on the Board of the Western Fair Association.

St. Catharines was chosen as the place of meeting.

The President and Secretary were appointed a printing committee, and a thousand circulars were sent out through the Province inviting membership in the Association, with good results.

A special meeting of the Directors was called in Toronto, for the purpose of appointing an Inspector and Sub-Inspector under the "Act for the Suppression of Foul-Brood," when Messrs. Wm. McEvoy, of Woodburn, and Samuel Bray, of Alliston, were appointed to the positions of Inspector and Sub-Inspector, respectively. It was thought advisable that a committee be appointed to arrange for the distribution of a pamphlet regarding "Foul-Brood, its Cause and Cure," and F. A. Gemmell, F. H. Macpherson, D. A. Jones and the President were detailed to this duty. This committee waited on the Minister of Agriculture, and arranged for the distribution of such a pamphlet, embodying the Act which had just been passed, and these formed the subject matter of an official Bulletin (No. 33) which was distributed to some 6,000 or 7,000 bee-keepers throughout the Province. An edition in German was also printed.

By-Laws for the guidance of the Inspectors, was also passed at this meeting.

The third meeting of the Directors has been held to-day, and the accounts for the year closed.

The membership for the past year has been the largest since its inception, numbering 323, and up to this date the renewals of membership for 1891 (85) are the largest ever before reported at an annual meeting.

During the year, eleven local associations affiliated with the parent society.

The Treasurer's report will show the Association to be in a fairly good financial position, although the amount of the balance in hand is not so large as in previous years, because of the drains on the Association purse, which the Treasurer will detail in his report.

The Association is in excellent condition, and it is hoped that our successors in office, may continue to keep up the interest that the present Directors have endeavored to maintain.

All of which is respectfully submitted.

THE SECRETARY'S REPORT.

The Secretary's Report showed receipts of $323 in membership fees, and $55 received from 11 affiliated societies.

THE TREASURER'S REPORT.

The abstract of the receipts and expenditures of the Ontario Bee-Keepers' Association for the year ending Jan. 7, 1891.

RECEIPTS.

To cash balance from last year	$ 299.51
To fees from Secretary	378.00
To Government Grant	500.00
	$1177.51

DISBURSEMENTS.

By cash in connection with foul-brood Legislation	$ 155.25
By cash for smokers to members	278.05
By cash Director's expenses	184.40
By cash grants to affiliated societies	299.75
By cash printing	21.75
By cash Secretary's salary	50.00
By cash sundry items	136.43
Balance in hand	51.81
	$1177.51

R. McKNIGHT, Treas.

THE AUDITOR'S REPORT.

The Auditors, D. Anguish and A. W. Humphries, reported having carefully examined the books and accounts of the Secretary and Treasurer, finding them correct in every particular.

On motion of F. H. Macpherson, seconded by C. Urlocker, the Reports of the Secretary, Treasurer and Auditors were received and adopted.

THE PRESIDENT'S ADDRESS.

President Allen Pringle then delivered his address:

During the reading of the President's Address, the Mayor of the City of St. Catharines entered, and immediately at its close the Mayor was called on, when he delivered an address of welcome. He stated that during the past two years some five or six associations had honored St. Catharines with their presence, and none were more welcome to the Garden City than the Ontario Bee-Keepers' Association. He then dwelt for a short time on the advantages of St. Catharines as a place of residence, especially dilating on its system of water works, which were on the gravitation system, and were considered by the good people of "St. Kits" as the finest in the country. In closing, he referred to the father of bee-keeping in their city, Mr. Hellems, who, he said, had done much to create an interest in the pursuit in their midst.

President Pringle thanked the Mayor for his kindly address of welcome, and also for the interest he had taken in furnishing such a comfortable place of meeting. Speaking of the water works, he said that the use of bad water caused an immense amount of sickness. Every family should have a filter. He had had one in use for upwards of 15 years, and instead of using hard water, soft water was filtered, and it was thus rendered free from all impurities except mineral substances held in solution, and he thus had good wholesome, pure water. He advised every one to get a filter.

In closing, he called on Mr. Hellems, a white-haired old gentleman who had evidently passed the alloted span of three-score-and-ten years. Mr. Hellems explained that he had kept bees for over 50 years, and that as a boy at home, when but 10 years of age, he had handled them without gloves, veil or smoke.

RESOLUTIONS.

On motion of R. McKnight, seconded by S. Corneil, the President and Secretary were instructed to prepare a full report of the meeting, together with all the papers read, to be forwarded to the Minister of Agriculture, together with the usual report.

Moved by F. H. Macpherson, seconded by S. Corneil, and

Resolved, That this Association desires to place on record its appreciation of the services rendered this Association by the Minister of Agriculture, in the matter of the passage of the "Act for the Suppression of Foul-Brood," and for the generous distribution of an official bulletin relating to the cause and cure of that disease, and that this resolution be embodied in the report to the Minister of Agriculture.

FOUL-BROOD AND IMPORTED QUEENS.

D. A. Jones, in discussing the suggestion of the President concerning the importation of queens, was satisfied that it would be a very difficult thing to prevent the importation of queens from the United States and foreign countries. No danger of foul-brood from the importation of queens need be apprehended, if the queens are sent with *food of sugar stores*; and if those getting them will be careful to destroy *all* the bees which accompany the queens. It was Mr. Adam Grimm who gave this matter a thorough test. He had 200 colonies, all more or less affected with the disease, and the queens in many of the colonies were worth at that time from $10 to $15. He did not wish to do away with his queens, and he experimented and found that he could put the queen in a clean colony with no danger of giving it the disease.

It was here decided that any further discussion on the subject should be held over until after the reception of an essay which would be read, and the Report from the Foul-Brood Inspector.

AFFILIATION WITH N. A. B. K. A.

On motion of R. McKnight, seconded by S. K. Darling, and

Resolved, That we continue in affiliation with the North American Bee-Keepers' Association.

WINTER PACKING.

J. B. Hall asked, "What is the best time to unpack bees, wintered outside?"

F. A. Gemmell—About June 1, or just before the swarming fever.

P. Bussey leaves packing on until they hang out; then he takes the packing off, down even with the top of the brood-nest.

R. McKnight—The question admits of two answers. If in single clamps—not at all, if it is not inconvenient to work with them. If packed in clamps (six or eight, or more, together) whenever it was found necessary to separate the clustered bees, to prevent confusion. He had 14 individual-cases, and he keeps the bees packed in them until he wants to get at the hives, readily, for manipulation. He always leaves them packed until the last minute. Considered the individual-case best.

Wm. McEvoy packs on the Summer stands in single clamps.

A. W. Humphries related the case of a friend who never unpacked his bees at all, and who always had success. He kept them in a bee-shed, facing the east, in three tiers, separated by divisions in the front, and he manipulated them from the back of the hives. In 1889, he had 24 colonies, increased to 36, and took 500 pounds of comb-honey, and 1,100 pounds of extracted-honey. In 1890, which was not so good a season, he had 35 colonies, increased to 37, and took 250 pounds of comb-honey, and 1,100 pounds of extracted-honey. As his colonies increased, he extended his shed.

P. Bussey—The hives should never be more than 4 inches from the ground, in the honey season.

Some one then asked what was the best packing.

S. Corneil—In the language of a Scotch bee-keeper, in the *British Bee Journal*, "The best packing for bees, is bees"—when the hive gets *full*, then unpack.

W. A. Chrysler—In Kent county, chaff-packed hives were considered the best—the nights were cool, and the days raw and windy, in early Spring and early Summer. They kept the covering over the top until June 10 or 15.

D. Anguish used chaff-packed hives right through the Summer, with 4 inches of packing.

S. Corneil considered it best to protect, by means of permanently packed walls, which will not make the hives unwieldy. He believed he had the warmest hives in Ontario. They were packed with cork-dust; were not more than 17 inches square outside, and when filled with combs, did not weigh more than 22 or 23 pounds. The outside walls were of ⅝-inch lumber; then came 1⅛-inch cork-dust, then 3-ply of carpet, felt-paper, and then the inner wall of ⅛-inch picture-frame backing. The entire wall was but 2⅛ inches thick. He was willing to test them against any known hive for heat-retaining qualities..

J. Myers used flax-chaff for packing, but it drew dampness.

R. McKnight was opposed to chaff-packing. He believed that cork-dust was the best; and he believed also that he was the *first* in the world to recommend it. Chaff draws dampness, and it becomes an absorbent, when used over the frame. An absorbent was not what was wanted, but something that would transmit moisture. Cork was always dry. Dry leaves were better than chaff, but the cheapest was sawdust, taken from thoroughly-dried lumber, such as is usually ripped up in planing mills.

D. Chalmers wintered his bees in three different ways—in a house, large clamp, and in an individual-clamp, on the Summer stands. He preferred the latter. He was trying dry wood-ashes as a packing, and hoped it would turn out well.

S. Corneil—If Mr. Chalmers would look in the Encyclopedia Brittanica, he would find that dry ashes was one of the *very good* non-conductors, and will retain heat.

J. Myers had tried cork-dust, and found it good.

S. Corneil—The objection to cork-dust was the difficulty of obtaining it. He had obtained 500 pounds in Rochester, which cost him 5 cents per pound and the freight, If there was likely to be enough demand for it, a firm in Toronto had said they would put in a machine for grinding it.

Mr. Pringle—With the exception of cork-dust, which was the best, he has found that dry, fine sawdust was the best available packing.

Mr. McEvoy asked for a vote on the question of "Out-Door *vs.* In-Door Wintering," and after a good deal of discussion, when a show of hands was called for, it appeared that the majority present were in favor of packing on the Summer stands.

EVENING SESSION—FIRST DAY.

At 7:30 p.m. the President called the meeting to order, and asked for Mr. R. McKnight's essay on

HONEY-PRODUCING PLANTS.

When requested to prepare an essay on honey-producing plants I felt the duty to be a difficult one. The more I looked into the subject, the more apparent did the difficulty become, not because of the meagerness of the subject, but because of its magnitude.

A little investigation will reveal the fact that honey-producing plants are more numerous and widely diffused than most of us have any idea of. We all know the class of flowers from which the greater part of our surplus honey is collected, and have some acquaintance with the richness of their nectar-producing capabilities; but few of us have any conception of the vast variety of plants that contribute to the simple wants of the bee. They include all, and more than all, that require the visitation of insects, for their fructification and continued existence.

Moreover, it is a recognized fact among scientists, who have devoted much time to the investigation of botanic mysteries, that flowers once devoid of perfect nectaries, and wanting in the functions necessary to the abundant production of honey, may be so changed, through time and selection, as to become so. This being the case, it is possible that flowers that now regale the bee with their sweet laudations, may in time lose their power to supply their liquid attractions, and possibly pass out of existence. It must be borne in mind, that honey-producing plants are not limited to those only whose flowers are visited by the bee. The flowers of many honey-producing plants—their nectaries and the modification of their nectaries being so arranged that the bee cannot extract the honey therefrom—when it is easily accessible to other insect tribes.

Then, again, there are families of plants that yield nectar, not found in the blossoms—that, popularly speaking, have no blossoms—the common bracken may be cited as an example.

A sweet liquid is oftentimes exuded from the leaves of a great variety of trees and shrubs; and appropriated by the bee. It is, however, generally taken by it at second-hand, being first collected by myriads of tiny insects, and subsequently expelled from their bodies in a modified form, when it is popularly known as honey-dew.

It is therefore manifest that for me to attempt to enumerate the honey-producing plants, even of my own neighborhood, would be a hopeless task. Indeed, I am persuaded that no bee-keeper or botanist has yet accomplished the work of naming the entire list of honey-producing plants of this, or any other country. A tolerably complete list of those best known, may be found on page 386 of "Langstroth on the Honey-Bee," revised by Dadant. To this I refer those who are curious to learn the names of the best honey-producing plants of North America. R. McKnight.

Owen Sound, Ont.

HONEY-DEW.

F. A. Gemmell asked with reference to the secretions found on willows, what it was that the insects lived on, and if it went through any change before being exuded and taken up by the bees?

Wm. McEvoy thought that honey-dew was atmospheric. He had found the secretion on the leaves of trees, but could find but one or two of the aphides.

S. Corneil—If Mr. McEvoy had gone higher up the tree he would have found millions. In the Fall of 1886 he was away from home several months, and left his bees in charge of others. That Fall, the aphides had come in bigger flocks than ever, and his bees gathered much of it. The colonies were doubled down to 180, and some of the honey-dew was fed to those deficient in stores. The smell was horrible, and the mixture was as dark as black-strap. In the Spring, his 180 colonies had dwindled down to 50 or 60. He had exposed some of the combs, but there were no bees around Lindsay that would rob them.

J. K. Darling corroborated what Mr. Corneil had said. The aphides live by puncturing the leaf or stem. The liquid is exuded from some little horns at the rear. He formerly blamed the ants for killing his cherry trees, but he had since found that they were going up the trees to milk the aphides.

D. A. Jones—When Prof. Cook visited Beeton, some years ago, they had gone into the bush, near one of the out-apiaries, and cut off branches, on the leaves of which were thousands of these aphides, and when exposed, under a microscope, they could be actually seen puncturing the leaves.

Wm. McEvoy asked why it was most prevalent during dry weather?

J. B. Hall—The reason was that if we had lots of wet weather, it would wash off the leaves; when dry, the exudations dried on the leaves, and in the morning, when wet by the dew, the bees gather it.

R. McKnight believed that the presence of honey-dew was accounted for by the atmospheric conditions, but the saccharine matter comes from the plant, and not from above.

[To be Continued.]

Wintering Bees in the Cellar.

D. B. CASSADAY.

Last Fall I dug a cellar under my house in which to winter my bees. I made it 12x14 feet, and 8½ feet deep. The soil was sandy and very dry, and having no stone to wall it up, I curbed it with oak planks. I drove posts into the bottom of the cellar, and placed a wide board on them, on which to place the hives, taking care that the edge of the board projected far enough over the posts to prevent the mice and rats from getting at the bees.

I then took some stove-pipe, ran it through a hole in the floor, and connected it with the pipe of the cook-stove. There is a strong draught going up that pipe all the time, and there is no bad smell or dampness in the cellar. The pipe comes down to within a foot of the bottom of the cellar.

After I had placed the hives on the board, and covered the brood-frames with old sacking, I put empty cases, 6 inches deep, on top of them, which I filled with dry forest leaves. I then raised the front of the hives one inch, so as to give air and plenty of room for the dead bees.

My bees are doing well so far, and the cellar keeps at a temperature of 38° to 40° all the time. I put the bees in the cellar on Nov. 28.

Bees did poorly here last year, the weather being too cold and dry in the early part of the season. They gathered no surplus until the buckwheat and Fall flowers bloomed, then some of the stronger colonies gathered a little. I think they have enough stores to winter on.

Litchfield, Minn., Jan. 17, 1891.

Apicultural Inventions.

F. D. LACY.

I have read with some interest Ernest R. Root's article on the above subject, and I am glad to see one from him of such a conservative character. Yet, I differ with him as to the field of invention being narrowing down; I claim that it is broadening out. The field for thought enlarges as the mind increases in wisdom, and new requisitions are called for by man, as he advances in intellectual development; and in accordance with this demand, the requirements are supplied. As man has not learned all there is to be known, the field for invention is still limitless.

Ernest says, that some inventions are like some men—"It were better that they had never been born." I will say, it might have been better had the invention never been born, but as to the inventor being born, that was under the jurisdiction of a higher power, to whom I do not wish to dictate. Let us not criticise God's authority.

If a worthless patent has been granted, let us not deride the patentee, for he believed it to be a good one, and sacrificed time, hard study, and cash upon it; and for his exertions he deserves our charity and kind feelings, since he has been the unfortunate loser.

Many poor people have been duped by worthless inventions, yet that does not justify the discouragement of improvements in every line of industry; and, as self-preservation is the first law of Nature, let each guard prudently his own interest. The benefit a patentee gets for a poor invention, is his labor; still, some will get duped with his device, for there was never one foolish person without another to match him, and like assimilates to like.

The art of invention becomes a habit, and whoever encourages his mind in such direction, is liable to become as much a slave to it as a drunkard is to whisky; and his cogitations are constantly upon how to improve this or that mechanism; and during nights of sleeplessness, he devises and calculates, while the opposers of inventions are sleeping. Now, let us not disown him, for had it not been for such as him, we would still have gone to mill with the grain in one end of the bag, and a stone in the other, to balance it.

I presume I am a little selfish in treating this subject, being an inventor myself, and judging others by myself (a righteous judgment), I think others are also selfish who oppose inventions, since they are *not* inventors, and may fear that something will appear that will supersede the articles they handle.

The true merits of a device are found in testing it. Nor need there be any haste in crowding it into use. If it be practically useful, the world will acknowledge it in due time, and all jealous opposition is but a favorable advertisement.

Nirvana, Mich., Jan. 23, 1891.

A Frame with a Divided Top-Bar.

W. P. FAYLOR.

Mr. Albert Dakin, of Onondaga county, N. Y., sends me a sample frame, wishing to have me speak of its merits through the BEE JOURNAL.

It is a modified Hoffman. The difference is, that Mr. Dakin uses two bars for the top instead of one. The advantage, he claims, is in fastening comb foundation securely between the top-bars. I notice, in the last issue of *Gleanings*, that Mr. Root offers the same thing for sale; and who the inventor of this double top-bar arrangement is, I do not know. While this kind of frame has some advantages, it also has disadvantages. It is a nice thing the first time we nail such frames together, to fasten in the foundation, but suppose we want to cut out a comb and put in foundation the second time, as we often do, then our trouble begins with such frames. Again, driving nails crosswise through the bars, we are apt to hit some nails a little hard, and, as a result, a point of a nail sticks out, to dull a good knife.

I always use a triangular top-bar, then I have no difficulty in bending the foundation over the edge of the bar, and when I cut out a comb, the frame is in good condition for putting in foundation again. The frames with triangular top-bars do not sag like level frames with comb guides.

Moreover, I do not prefer a frame of any kind with end-bar partly closed. I want the end-bars closed entirely, or have them loose. If I were to use a frame, like the sample sent, with double top-bar, I would nail the halves apart far enough so that I could slip a piece of foundation between the divided bar, and fasten it with a little wedge or two. Then, in case I wanted to re-insert foundation, it could be done without pulling nails. What wax would remain between the halves, could be easily melted out.

What we need now, is some kind of a clamp, or device to hold, or clamp, closed-end frames together, without putting frames down inside of a box. Read my former article on "Closed-End Frames."

State Line, Ind.

Some Apicultural Notes.

J. M. YOUNG.

Our extracted-honey is selling slowly, although we have considerable on hand yet.

All our hives are covered with tin, for board roofs will leak, sooner or later.

The old queen goes with the new swarm (to boss things, as a beginner always claims) when setting up housekeeping.

We are going to try the new dovetailed hives this season, and will report our success in these columns from time to time.

Bees ought to do well this Winter, for there has been no cold weather worth mentioning yet; but then we expect a month or two of severe weather yet.

Bee-keepers should always have their name and address printed on their stationery, and everything sent out by mail; it saves a world of trouble for those who do business with them.

We seldom fill honey-sections more than half full of foundation, and often use nothing but a starter; those that have a starter are often filled with honey nearly or quite as soon as those filled half way down.

We have half a brick under each corner of our hives, for them to rest on; and then we keep the weeds cut off closely around the hives. We do not like to see hives up on stilts, like some bee-keepers often place them.

A nice way to prevent after-swarms is to open the hive soon after the first swarm has issued, and pinch off the queen-cells; but leave at least one cell, or a queen to furnish another for the colony.

We find this method most generally successful.

It is no use to try to keep bees pure, if you have hybrids or black bees in your vicinity, or anywhere within three miles of your apiary.

In hiving a new swarm of bees, always put in a frame of brood containing larvæ in all stages, in your new hive. This will insure the safety of the new swarm, and keep it from leaving and going to the woods.

Moth-proof hives are such that will exclude the bees entirely. Moths are seldom seen in strong colonies, and, in fact, the best moth-proof hive we ever saw, is a good strong colony of Italian or hybrid bees. If you do not believe this, just keep all your colonies strong, and then look and see how many moths can be found.

Just about as we expected. Something turned up that we did not get to our Bee-Keepers' Convention, held at Lincoln. As Lincoln is 50 miles west of us, it is not so very handy to attend as one would suppose. But we hope to see the proceedings published in the AMERICAN BEE JOURNAL, as the Secretary, Mr. J. N. Heater, always has it published sooner or later.

Our apiary is located in a grove of natural timber of small saplings, with old mother earth sloping to the east. Some of our new swarms settled, last Summer, in the tops of these same saplings, 30 feet from the ground. We became an expert climber. In taking them down, we used a small ½ inch rope, 30 feet long, with a hook on one end. This is hooked over the limb near where the bees have settled; then the limb is cut or sawed off, and before the bees hardly know it, they are drawn in front of the hive. We use a 16 foot ladder to aid us in reaching the nearest limbs.

It is just about like friend Miller to ask us that question about our sections holding "just one pound." When we said exactly one pound, we did not exactly mean a pound to a notch, but as near as we could get at it. The 4¼x4¼ inch size will hold nearer a pound than anything else we have tried. The width that we usually use is 1⅞, and all in one piece; sometimes they go over a pound, and sometimes less, but in crating them we make them average a pound all around. We have trained our grocery keepers and customers to think that they hold a pound; they are usually sold by the piece, and there is very seldom any dissatisfaction, for a customer often gets more than a pound rather than less.

Plattsmouth, Nebr.

Moving Bees a Short Distance.

A. C. DOWNING.

I see the question of moving bees is being discussed quite freely.

I have had much experience during the last few years in moving bees in wagons, over smooth and rough roads, and I have never had to fasten the frames, either at the top or bottom.

If I move them in a spring-wagon, I place the frames crosswise to the road-bed, but if the wagon is without springs, I place them the other way. I have had good results every time, in moving them in this way.

As to the time to move bees, I prefer the Spring, just before they commence brood-rearing, as it is certain to start them to breeding. If moved at the right time, they will do better than those which are not moved at all.

My report for 1890 is better than most of those I have seen. My 62 colonies, Spring count, gave 4,000 pounds of honey, 1,000 pounds of which was in one-pound sections. What I have sold, brought 15 to 20 cents per pound for comb-honey, and 10 cents per pound for extracted. I have still about 2,000 pounds on hand.

The white clover is looking fine, and I think the prospects for next season are good. White clover is the only thing we get a surplus from, in Kentucky. The greater part of my clover honey is still liquid.

Lexington, Ky., Jan. 22, 1891.

Ten-Frame Hives for Profit.

W. C. WOLCOTT.

In the answers to the question, "Which is the best size of hive for comb-honey?" I see that the majority prefer the 8-frame hive. My experience is in favor of the 10-frame. I have a cousin living ½ a mile from me, and much nearer the basswood than I am. His bees and mine range on the same fields, and he gives more attention to his bees than I do to mine, and also has more Italians than I have. He uses the 8-frame Langstroth hive, and I use the 10-frame Langstroth. Here is the result for 1890: He had 82 colonies which increased to 123, and in the Fall he took 1,200 pounds of comb-honey. I had 77 colonies, which increased to 96, and in the Fall I took 1,750 pounds of comb-honey in one-pound sections, and also 1,500 pounds of extracted-honey. In the Fall of 1889, I had 102 colonies, and he had 120. I took 2,180 pounds of comb-honey, and 2,000 pounds of extracted-honey, while he took but 1,440 pounds of comb-honey. I have beaten him, in about that proportion, for the last four years.

Eldorado, Wis., Jan. 19, 1891.

Effect of the Weather on Honey.

E. W. POWERS.

On page 818 of the last volume of the Bee Journal, is an interesting article from Joshua Bull, on the subject of heavy thunder having a tendency to check the accumulation of nectar in flowers. I do not know if the ideas advanced are altogether correct, but I believe there may be something in them. There are, I believe, certain atmospheric conditions on which flowers are dependent for nectar, which conditions seem to be changed, from some cause, after heavy thunder. I will mention an occurence that came under my notice three years ago, which was not altogether the effect of heavy thunder.

In the Spring of 1888, we had a great deal of wet weather. About April 15 it cleared up, and it was fine for about six weeks, with but an occasional shower; the temperature ranging from 80° to 85° during the day, and not below 65° or 70° at night, with a gentle breeze from the southwest. On April 15, honey-dew could be seen, this being earlier than common for it to make its appearance, and by May 10, the forest growth, such as oak, poplar, hickory, linden, etc., was actually shining with it. About June 10, a heavy rain washed it all from the trees, but within 48 hours it could be seen accumulating again. In 3 or 4 days the temperature changed, going up to 90°, and again it rained, and the honey-dew disappeared for that season.

I had at that time 16 colonies which averaged 60 pounds per colony of surplus honey. They built about half of the comb, and had 30 or 40 pounds in each of the brood-chambers. This honey was gathered from poplar and tulip, which bloomed about May 10, just at the time the honey-dew was harvested.

The year 1889 was not so favorable for bees as the previous one, the air being dry and cool, the temperature ranging from 65° to 75° during the day, and from 45° to 55° during the night, with a cool wind from the northwest. It continued cool for 4 or 5 weeks, and not a particle of honey-dew was to be seen. Poplar bloomed in profusion about the middle of May, but there was very little nectar in the bloom.

My 16 colonies, that gave me 60 pounds per colony the previous year, were in good condition, but gave me no surplus at all. This was the first year since I have been keeping bees, that I obtained no surplus.

In this locality, when there is a heavy honey-dew, the weather favorable, and the bees in good condition, we expect a good crop of honey, but when there is but little honey-dew, it matters not how favorable the weather may be, how good the condition of the bees, or how profusely the flowers bloom, we get no surplus honey.

Palmyra, Tenn.

North Carolina Convention.

B. C. GRIFFITH.

The bee-keepers of North Carolina met at Pineville on Dec. 18, 1890, and were called to order by the President, A. L. Beach. In the absence of the Secretary, B. C. Griffith was elected secretary *pro tem.*

The minutes of the last meeting were read and approved.

High water and a late train prevented more than one session on the first day of the Convention.

The question-box was opened and some topics discussed, after which the convention adjourned until the next morning.

On Friday, at 10 a.m., Vice-President S. L. Kluttz called the convention to order, and four new members were added.

The Constitution and By-Laws were discussed, amended and adopted; the committee were instructed to have them printed—using not more than two-thirds of the money in the treasury to defray the expense. Members were to be allowed advertising space at one-half the usual rates.

The question-box was then opened, and the questions discussed.

When moving bees, which would give the better results, to place the colony on the old stand, to catch the field bees; or, on the new stand, to build up the old colony? All things considered, the old stand, with surplus cases removed from the old colony to the new, had a majority vote.

Which gives the best results, open or closed-side sections? Only one member had any experience with open-side sections, but he made a good report.

Which is the best method of introducing queens? Several plans were discussed, most of the members having no special way, but used various plans most suitable to the particular time and conditions. One member was quite successful in losing his queens, and on being questioned, stated that he had introduced them in a dearth of honey.

How best to keep out the moth? This was answered by an address from W. D. Pyron. His best plan was to have strong colonies of Italian bees, and give a wide berth to patent bee-hive venders. He thought the latter the worst moth a bee-beeper had to contend with.

How best to keep the small bee-keepers from spoiling the honey market? After discussion it was decided that the best thing to do in this case, was to educate small producers to put their honey in a neat, marketable package before putting it on the market.

Essays of interest were read by several members.

A. I. Root and Thomas G. Newman were elected honorary members of this Association.

The Constitution was amended to hold the meetings annually instead of quarterly.

It was further agreed to hold the session in the month of July, at which time all the members are requested to make a creditable exhibit of bees, bee-fixtures, and all things that go to make up an apiarian outfit. After some discussion, it was suggested that in order to create interest, local societies be formed at any convenient place, where as many as five persons could be found, who were sufficiently interested. These societies to work in harmony with the parent society.

The election of officers for 1891 resulted as follows:

President, S. L. Kluttz, of Clear Creek; 1st Vice-President, B. C. Griffith; 2d Vice-President, H. E. Bost, of Davidson College; Secretary, A. L. Beach, Pineville; Treasurer, Capt. E. W. Lyles, of Charlotte.

Charlottee, N. C., was selected as the next place of meeting.

Twelve members reported 263 colonies, and an aggregate surplus of 4,550 pounds of honey.

B. C. GRIFFITH, *Sec. pro tem.*

Clipping the Wings of Queens.

N. D. MARKHAM.

The plan of G. W. Demaree, on page 13 of the BEE JOURNAL, is about my idea of clipping the wings of queens. I have practiced it 10 years, never have hurt a queen, and do not think I have lost one. I clip them for two reasons: 1. It is a good deal less trouble in swarming-time. 2. I know the age of every queen. I have 100 colonies; all hives are numbered, and I keep a record book for the purpose; each colony has a record of its own, and when I clip a queen's wing, I make a note of it. I know where my good and poor queens are all the time, and if I wish to supersede any queen at any time, by referring to my book, I know where to commence. My theory is, the more familiar I am with my bees, the less trouble they are to me, and the more profitable they are. I generally do my clipping all at one time, when I am getting them ready for the summer harvest, say in May, or the first of June.

I have a neighbor who has adopted the plan of following the queen around on the comb, and clipping her on the run; he is an expert. But once he clipped the queen in halves, when he was giving one of his students a lesson on the clipping of the queens' wings.

Hart, Mich.

◆

If you have a desire to know how to have Queens fertilized in upper stories, while the old Queen is still laying below—how you may *safely introduce* any Queen, at any time of the year when bees can fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact, everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and is as interesting as a story. Price, bound in cloth, $1.00. For sale at this office.

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Reader, the BEE JOURNAL is working for your interest every day in the year, and now you are respectfully invited to work for its interest, by devoting a few hours to get a *new* subscriber for it, and thus help to make it still more valuable and useful to the pursuit.

CONVENTION DIRECTORY.

Time and place of meeting.

1891.
Feb. 10, 11.—Ohio State, at Toledo, O.
Miss Dema Bennett, Sec., Bedford, O.

Feb. 11, 12.—Eastern Iowa, at Maquoketa, Iowa.
Frank Coverdale, Sec., Welton, Iowa.

May 7.—Susquehanna County, at Montrose, Pa.
H. M. Seeley, Sec., Harford, Pa.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—The Editor.

North American Bee-Keepers' Association

President—P. H. Elwood....Starkville, N. Y.
Secretary—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

President—James Heddon ..Dowagiac, Mich.
Sec'y and Manager—T. G. Newman, Chicago.

Bee and Honey Gossip.

Thinks there is Money in Bees.

I began in the Spring with 13 colonies of bees, and increased to 20, which I think is doing well for a beginner. I think there is more money in bee-keeping than in anything else, and I intend to keep at it. The weather was very dry here last year at honey-flow. I hope to see a good honey exhibit at the World's Fair. W. C. Davenport.

Roseville, Ills., Jan. 21, 1891.

Bees are Wintering Well.

I have 2 colonies of bees which I have kept for one year. I took 75 pounds of comb-honey from them, and they are now wintering well. The bees in this neighborhood are all in fair condition.

Scott Wheeler.

Denison, Iowa, Jan. 14, 1891.

Clamp for Standing-Frame Hives.

I have been using standing-frame hives for three years. They are held together by bolts, one at each end, and were a nuisance in more ways than one. First, the sides of the hive had to be longer than the frame, to allow room for the bolts, then the frames had to be lifted up between the bolts, often catching on them, and if the frame was covered with bees, the scraping on the bolts would kill some of them. I had about made up my mind to throw them away, when I read Mr. Faylor's article on page 51 of the Bee Journal. This set me to thinking, and I went to my workshop and made a clamp that will hold any number of frames together. It will draw a hive together and hold it tight, so that it can be set on end or reversed. There are no bolts to rust, and when loosened, it can be laid down until wanted again. I can now add a couple of frames to my hives when building up in the Spring, and can easily contract them for honey-flow by taking away the frames, putting on the side, and slipping on the clamps.

Geo. T. Gunn.

Wall Lake, Iowa, Jan. 18, 1891.

Poor Season in New York.

The honey season of 1890 was the worst I have experienced during 19 years of bee-keeping. I was obliged to feed this Fall for safe wintering. My 45 colonies, Spring count, are in fair condition. I winter on the Summer stands, but I will have to feed early in the Spring. George Smith.

Liverpool, N. Y., Jan. 19, 1891.

Anticipates a Large Honey Crop.

I see by the Bee Journal that some persons make a success of bee-keeping, while others make a failure of it. I began last Spring with 4 colonies, and increased to 7, but they gathered no surplus honey. My bees went into winter quarters with plenty of stores, and seem to be doing nicely. I fear a good many colonies, in this section, will starve this Winter unless they are well looked after. I anticipate a large honey crop this season, if white clover yields any honey, as there will be a very large range here if the clover does not winter-kill.

J. W. McCarty.

Plainview, Minn., Jan. 15, 1891.

The Dibbern Bee-Escape.

On page 75 of the Bee Journal for 1891, Mr. Whittlesey gives his experience with bee-escapes, before the Northern Illinois Bee-Keepers' Association. He stated that in some cases it had worked well, and in others not at all, as it took several days, and that he was not satisfied with it. It is almost certain that Mr. Whitlesey had one of my old, 4-point escapes that I brought out last

Winter, and discarded as soon as I had a fair chance to test it, by actual use, in warm weather. I have investigated several cases of alleged failure with my escape, and have invariably found it was the old style, and not my new 4½x6½ inch, between sheets of tin, that was condemned. So far I have not heard one word of complaint, but many compliments from those having tried the new pattern. It has worked perfectly with me and my neighbors, and I do not see how it could be improved.

Milan, Ills. C. H. DIBBERN.

Good Results.

In 1889, I had 4 colonies, Spring count, which increased to 20 by natural swarming. From these I took 600 pounds of surplus honey in one-poond sections. In 1890 I had 10 colonies, Spring count, which increased to 30, and from which I took 1,200 pounds of comb-honey in one-pound sections.

Rush City, Minn. J. R. ROBIE.

Spraying Fruit-Trees with Poison.

My bees are very quiet in the cellar, with the temperature at about 50°. Everything has gone well with them so far, but there may be trouble ahead from spraying fruit-trees with poison when in bloom. This may become a craze that will bring death to our bees. I apprehend nothing from malice or envy, but ignorance sometimes causes a great wrong. We must do all we can to protect our pets—although 82 years of age, they are my pets still. I like to be with them now as well as 50 years ago. We have had bad seasons of late, but my colonies have kept themselves and given me a fair return. I am still hopeful.

Waterville, O. L. EASTWOOD.

Honey Report for 1890.

I commenced the season with 110 colonies, removing them from winter quarters on April 17, having sustained a loss of 6 colonies in wintering. A part of the season seemed to be quite favorable for honey, but there seemed to be no nectar in the flowers, or very little. I sold 1,042 pounds of extracted-honey, besides keeping some for our own use, and I got about 20 pounds of comb-honey. I sold the extracted-honey in 26 pound lots at 12½ cents per pound, and in 13 pound buckets at 13 cents per pound. I put 97 colonies into winter quarters. I fed in the Spring about 500 pounds of honey in extracting combs, saved over for the purpose. Counting the diminution in bees, and the 500 pounds of honey fed, I might say the season of 1890 was a total failure with me. I put the bees in the cellar from Nov. 11-13, which is a little early, I believe, for this year. I bought 49 colonies, which were put into the cellar in December. All seem to be doing very nicely at present, but I think those put in last, are the most quiet. It was warm and dry in November and December, but we had about an inch of rainfall, and 8 inches of snow on New Year's, which I think excellent for the white clover crop. I think that the prospects are quite encouraging for bee-keepers in this part of the country. I like the new form and make-up of the BEE JOURNAL very much, and look forward to the visits of both it and the HOME JOURNAL, just like those of old friends, for I prize them both very much. I would say to those wishing to write to me, that we have a new post-office, so that they can write me at the new address. W. C. NUTT.

Murphy, Iowa, Jan. 20, 1891.

Gathering Honey Now.

I started in the bee-business a year ago last May, by capturing a runaway swarm that had settled on a grapevine on my place. During the Summer and Fall they cast 3 swarms, making me 4 colonies, which supplied the family with honey that season. Last Spring, each of the 4 colonies cast one swarm, now making me 8 colonies. The 8 colonies gathered 624 pounds of comb, and 150 pounds of extracted-honey. After the honey-flow was over, I divided the 8 colonies into 20, which I now have in good condition, and gathering honey at the present time. I owe much of my success to the AMERICAN BEE JOURNAL, and to a neighbor who is an old-time bee-keeper. California is the bee-keepers' paradise. The bees gather honey almost every day in the year, but the heavy flow begins in March, when the orange trees are in blossom, and a little later the white sage comes in.

THOS. S. DOWSE.

Ontario, Calif., Jan. 19, 4891.

Gathering Honey from Pine Trees.

I had a very poor honey crop last season. My bees worked among the pines, during what some of my neighbors called a flow of honey-dew. The pine trees were covered with little green insects, which deposited a sweet substance in such abundance, that drops of it on the pine needles, sparkled in the sun. I feel certain that the honey was deposited by the green bugs. My bees worked in the pines almost the whole of last Winter, but when the Spring came, we had so much cold rain, that they did not prosper. I did not get a single swarm, or a pound of honey from my black bees. I had bought an Italian queen, and her colony gave me 25 pounds of surplus comb-honey, but did not swarm. I have 6 colones, and if all had given me as much as the Italians, I would have had 150 pounds of comb-honey. I am in favor of Italians.

JOHN D. A. FISHER.
Faith, N. C., Jan. 21, 1891.

Packages for Honey.

Responding to an article on page 109 of the BEE JOURNAL, in which a correspondent asks about the best style of package in which to ship extracted-honey, I would say, that off-grades and dark honey will sell in large barrels as readily as in small packages, as this grade sells to wholesalers for special uses; but fine grades of honey should always be put in 60-pound cans, or new kegs, holding 100 pounds of honey. In a future article, I will discuss the style of package for comb-honey. I believe that each State Convention, as well as the National, ought to decide the packages in which honey should be put.

Chicago, Ills. S. T. FISH.

Practical Information.

For practical information in its line, the AMERICAN BEE JOURNAL is the cheapest periodical that comes to my desk, and I read many. It is worth to me *ten times* its subscription price.

R. B. SCHOFIELD, M. D.
Newark, Mo., Jan. 30, 1891,

Likes the Trade-Mark Idea.

Yesterday was a warm day. My bees in the home-yard were flying, and, as far as I could see, all are in good condition. I should be very glad, if the Bee-Keepers' Union would get up a "Trade-Mark," as suggested in last week's BEE JOURNAL. This would help every bee-keeper to sell extracted-honey. I find (in the vicinity of New York city) that it is very hard to sell candied honey. People think it is not pure; but the honey put up in wholesale houses in New York, and mixed with some stuff, will sell before candied honey; not 1 in 5 knows what pure honey is, around here! I have always found it very hard to make people believe that candied honey is the only pure article, but a nice-looking tumbler, with a small piece of comb in the center, and white liquid around it, will sell—while the candied honey will not. This is enough to vex any bee-keeper, but what can we do about it? JOHN H. BLANKEN.

Jersey City, N. J., Jan. 24, 1891.

Trade-Mark Problem.

I think the idea of a Trade-Mark for bee-keepers is a good one, especially for producers of extracted-honey. As the emblem, for the Trade-Mark, how would it do, to have our two most noted pioneers in bee-keeping—Langstroth and Quinby, clasping hands, with the American Eagle, with wings spread over them, and holding a spray of our National flower, in full bloom, in its beak. Or, if that is too elaborate, cut it in two, leaving out one-half. S. H. MALLORY.

Decatur, Mich., Jan. 24, 1891.

Losses Already Commenced.

My bees did very poorly last Summer. I had 42 colonies, Spring count, but they dwindled down to 36 in the Spring, and then increased by natural swarming to 50, and they stored 200 pounds of comb-honey and 300 pounds of extracted-honey. I started to Winter 40 colonies on the Summer stands, but have lost 7 colonies so far. They were full of bees, and had lots of honey. Why it was so, I cannot tell. E. M. SHOWER.

Pine Bluff, Wis., Jan. 27, 1991.

Bees Rearing Brood.

We are having a beautiful Winter. We have had three good snow storms, and still it has not been very cold. It is very clear to-day, and the bees are out, as they have been for several days. They also have brood in all stages.

ED. E. SMITH.
Carpenter, Ills., Jan. 23, 1891.

☞ An exchange says that the largest amount of wild honey ever taken from one tree, was reported from Oregon recently. A farmer took 700 pounds from one cotton-wood tree, in which a huge colony of bees had stored up the annual accumulations for many years.

Wavelets of News.

No Alfalfa Honey in California.

It does not appear that California bee-keepers have so far made any attempt to produce honey from alfalfa upon any very extended scale. At all events, if they have done so it has escaped observation, and no honey of that kind is to be had in this market. In Colorado, on the other hand, alfalfa is now generally regarded as the best honey-producing plant that can be cultivated. The honey produced from the bloom is said to be of an exceptionally fine appearance and good quality.—*San Francisco Chronicle.*

Tub for Watering Bees.

I take a tub, tie a piece of burlap over it, put in a piece of brick or stone that will keep it down in the center; and then fill in with warm water until it comes up about one-third of the way on the burlap, which leaves a large surface for the bees to alight on. It is only occasionally that a bee gets drowned. One advantage of the tub is, it does not need looking after, except occasionally. Try it, and be convinced.—M. G. Wiggins in *Gleanings.*

Bee in a Telephone.

The experience of telegraph operators, inspectors and linemen brings them into close acquaintance with all sorts and conditions of faults in connection with their work; the variety of these faults is wonderful—many stranger than fiction.

One of the most curious in connection with telephony which we have ever known, has happened at a place called Moss Bay. The lineman's attention was called to the circuit in question, as hearing was difficult; on listening at the telephone he heard a "sort of booming, which came on intermittently, very much resembling the distant roll of the tide, and which rendered speaking and transmission of work almost impracticable."

Having satisfied himself by the usual methods that the instrument was right, and the line free from induction, and that it was not picking up vibrations, the conclusion was arrived at that the fault must be in the general office at Moss Bay.

An examination of the telephone apparatus disclosed a novelty.

A honey-bee was inside the telephone, and, in trying to make good its escape, it had become fixed between the sounding board and microphone, and it had hummed to the extent of interfering with the human organs of the circuit.

How the bee came there the linemen cannot say, whether by accident or design he knows not, but the bee was the cause of the fault.

In concluding his report, the lineman candidly states: "I have met some very tedious and technical faults in connection with various telephone apparatus, but I never was *done* by a bee before."—*Mechanical World.*

Rivalry Among Bees.

The thought has more than once suggested itself to the writer, as he has watched a number of bees at work upon some favorite flowers—whether the little honey-bearers ever strive to gain and keep such treasures to themselves.

Any one may be convinced, that a keen competition really prevails among bees, towards the end of the season, by taking the trouble to count the number of times in an hour, that a particular blossom is visited by a bee, or would be visited if it contained honey, as it is not necessary for a bee to alight on a flower, to know that she must go away empty.

Darwin has left it on record, after carefully watching certain flowers, that each one was visited by bees at least 30 times in a day, and it cannot be supposed that the little visitors in such circumstances, find much to reward their industry.

Sir John Lubbock has also shown that they will often visit from 20 to 25 flowers in a minute. It is very interesting to note, that on such occasions, bees always keep to the same species of flower during each visit to the fields.—*Exchange.*

Soldiers and a Bee-Tree.

When Johnson's army was about 12 miles from Vicksburg, orders were issued that death would be the portion of any man who fired a gun, chopped with an ax, or made any noise whatever. The confederates were in the rear of Grant, and they were interested in keeping very quiet about it. One day some of the soldiers noticed that some wild bees had selected an old dead tree as the depository for their honey. Away up in the top, the little workers could be seen storing their sweets. The soldiers looked upon them with longing eyes. How to get the honey was a problem. A single blow with an ax would be punished with death. One day a countryman came along and drew rein near the bee-tree.

He went into camp there, and when he started to build his fire one of the soldiers said:

"My friend, why don't you build your fire up against that dead tree?"

"Would anybody keer?" he asked.

"Of course not."

The result was, the countryman built his fire against the dead tree, and the tree caught fire. When the countryman departed the next day, he left the tree ablaze. It burned slowly that day, and gradually the bees were smoked out. With anxious and impatient eyes, the soldiers watched the fire. About the middle of the third day, the old tree came down, with a crash that could be heard for a mile. The soldiers lit upon the honey, like dogs upon a lame coon. When the excited officers reached the scene, they were informed that a countryman had fired the tree. By that time, however, the countryman was 50 miles away.—*Atlanta Constitution.*

Bees Refuse to be United.

During the drouth last Summer, a colony of bees deserted their hive. On examination, the hive was found full of comb, but without honey. The bees clustered near, and, being remarkably gentle, I determined to try to save them, by combining them with another colony.

I had read that, if bees could be given the same scent, they would sometimes go kindly together. A few drops of oil of anise was stirred into some sugar and water—the swarm and the bees in the hive, that was to receive the addition, were freely sprinkled with the mixture, also the entrance to the hive.

The swarm was then emptied in front of the hive; they flowed in beautifully; meanwhile, a drumming was kept up on the side of the hive. For several hours everything seemed harmonious; but alas! as soon as the hungry bees had eaten up the fragrant sweet, they turned their attention to the new inmates, and, seizing them by wings and feet, dragged them to the edge of the alighting-board, and tumbled them over.

They were probably mortally stung, as they seemed unable to fly; soon the ground on each side of the hive, was covered with the dead and dying. No amount of after-sprinkling had any effect to arrest the murderous work.

Of course, these little house-holders could not know of my intention to feed them through the drouth. One cannot but admire their wisdom in not allowing an addition to their family, in a time of famine, and in their regard to sanitation, in dropping the dead bees away from the front of the hive.—*New York Tribune.*

HONEY AND BEESWAX MARKET.

DETROIT, Jan. 27.—Comb Honey is quoted at 15@17c. White Clover quite scarce. Extracted, 7@8c. Beeswax, 26@27c.
M H. HUNT, Bell Branch, Mich.

NEW YORK, Jan. 29.—Market is very quiet, especially on comb honey. We quote: Fancy white 1-lbs., 15@16c; 2-lbs., 13@14c; off-grades, 1-lbs., 13@14c; 2-lbs., 12c; buckwheat, 1-lbs., 11@12c; 2-lbs., 10c. Extracted, basswood and white clover, 8@8½c; buckwheat, 6½@7c; California, 6¾@7¼c; Southern, 65@70c per gallon. Beeswax, 25@27c.
HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

KANSAS CITY, Jan. 27.—Honey is very slow sale, both comb and extracted. We quote: White 1-lb. comb, 16@18c; dark, 12@13c; white, 2-lb., 14@15c; dark, 11@12c; extracted, 6@7c. Beeswax, 25c.
CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CINCINNATI, Jan. 28.—Demand is good for all kinds of extracted honey, with a full supply on the market of all but Southern, which is scarce. It brings 6@8c per pound. Demand is fair for choice comb honey, which we hold at 18@20c, in the jobbing way.

Beeswax is in good demand at 24@26c., for good to choice yellow. C. F. MUTH & SON,
Corner Freeman & Central Aves.

CHICAGO, Jan. 29.—Demand at present not very active on comb honey. Fancy white, 18c; white, 17c; white 2-lb. sections, 15c; buckwheat, 1-lb. sections, 13c; extracted, 7@9c. Beeswax, 28c.
S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, Jan. 28.—Fancy white 1-lb. comb, 18c; fair to good, 17c; dark 1-lb., 14@15c; 2-lb. white comb, 15@16c; 2-lb. dark, 13@14c; extracted, white, 7c; dark, 5@6c.
HAMBLIN & BEARSS, 514 Walnut St.

CHICAGO, Jan. 31.—There is not the volume of trade usual at this season, yet prices are without material change since last quotations. Best lots of white honey in 1-pound sections, brings 17@18c; brown and dark, slow, at uncertain prices. Extracted, 7@8c per pound. Our stock is light, as to quantity, but is kept well up to demand by daily receipts. Beeswax, 27@28c.
R. A. BURNETT, 161 S. Water St.

BOSTON, Jan. 29.—While honey is selling slowly, prices are being well maintained, and the supply will be entirely exhausted before the first day of March. Best 1-lb. comb-honey is selling at 19@20c: fair to good, 18@19c. There are no 2-lb. sections on hand. Extracted, 7½@9c. There is no beeswax on hand.
BLAKE & RIPLEY, 57 Chatham Street.

ALBANY, N.Y., Jan. 27, 1890.—The honey market is quiet and steady, with light stocks of any kind or grade. We are selling white at 15@18c; mixed, 14@15c; dark, 12@14c. Extracted, white, 9@10c; mixed, 6@8c; dark, 6@7c.
H. R. WRIGHT, 326-328 Broadway.

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>
> W. J. PATTERSON.
>
> Sullivan, Ills., Dec. 5, 1890.

◆

Clover Seed.—White Clover Seed has declined, and Alsike has advanced. The price of either seed will be 25 cents per pound; $2.50 per peck; and $9.00 per bushel, until further notice.

◆

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◆

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◆

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◆

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American Garden	2 50	2 00
Rural New Yorker	2 50	2 00

Do not send to us for sample copies of any other papers. Send for such to the publishers of the papers you want.

* * *

We send both the Home Journal and Bee Journal for 1891, for $1.35.

* * *

☞ The Union or Family Scale has been received, and I am much pleased with it. W. H. KIMBALL.
Davenport, Iowa.

* * *

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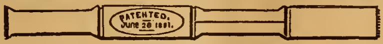

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ALL OVER THE WORLD
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVII. Feb. 12, 1891. No. 7.

Editorial Buzzings.

A Law on foul-brood is before the Wisconsin Legislature, and will probably be passed very soon.

◆

☞ The *Inter-Mountain Horticulturist* is a wide-awake monthly published at 50 cents a year, at Salt Lake City, Utah, by our friend John C. Swaner. It is nicely printed and well edited.

◆

Wisconsin is to have a grand exhibit at the Columbian World's Fair. The State Bee-Keepers' Association has appointed a committee to have charge of the preparations, and to superintend the exhibit. An application has been made to the Legislature for a grant of $1,000 to cover the expenses of the apiarian exhibit.

◆

☞ Mr. Timpe sent us some of his potatoes for trial. We hardly ever eat potatoes, but our family say that they were excellent for cooking, and very tasty. They certainly had a "flowery" appearance on the table.

Particular Attention is called to the letters of Dr. C. C. Miller, C. E. Yocom, and J. S. Hughes, on page 230, about the organization of a State Association.

If all who are interested will act in accordance with the suggestions of Dr. Miller, and send a postal card to this office AT ONCE, it can be determined where to permanently locate the State Society, and the call for a session of the Capital Society at Springfield, on Feb. 26, gives an opportunity for the organization to be completed at an early day.

The suggestion for such a convention on April 10, at Decatur, is all very well, but the time is too far distant for the accomplishment of the desired ends. The Society must be located and incorporated, and it must appoint a strong committee to present matters to the Legislature, in order to obtain a sufficient appropriation to pay the expenses of gathering, arranging, managing, and exhibiting the products of the apiary for the State, at the Columbian World's Fair. We imagine that all will admit that April is too late to calculate upon for the accomplishment of all this work.

◆

Eleven.—"There is luck in odd numbers," says an old "saw"—but at the risk of making it even, we will say that the life-members of the North American Bee-Keepers' Association now number 11, and that 39 more (another odd number) are required to make the number 50. So far, there are 4 in Illinois, and 4 in Ohio, and one each in Ontario, Iowa and New York. Let us break that tie by adding another to Ohio or Illinois; and get several from other States. A life-membership costs $10, and the money should be sent to C. P. Dadant, Hamilton, Ills. Who will be the next?

◆

Catalogues and Price-Lists for 1891 have been received from

W. S. Pouder, Indianapolis, Ind.—32 pages—Bee-Keepers' Supplies.

Jacob T. Timpe, Grand Ledge, Mich.—8 pages—Italian Bees, and New Seedling Potatoes.

Our Trip to Wisconsin.

It is difficult for us to leave the office during the months of December, January and February, but receiving such a pressing invitation, coupled with the assertion that we had declined all previous invitations to attend the State Convention, and that the bee-keepers of that State were anxious to make our personal acquaintance, we concluded to go and take the consequences of our absence for two days.

President C. A. Hatch was at the depot to meet and conduct us to the Capitol building, where the horticulturists and bee-keepers were holding a joint session. We received a hearty welcome, and were soon called upon for a speech, upon the question under consideration, which was whether the two pursuits of bee-keeping and horticulture were well adapted to each other, and could be practiced in harmony.

We complimented those present upon the excellent and harmonious relations seeming to exist, and upon the fact that quite a number of them were actually engaged in the two branches of business, and in practice had found them to be very well adapted to each other.

We then remarked that some few horticulturists had ignorantly opposed their neighbors who were bee-keepers, and had in some cases appealed to the law; but such a meeting as this would do more to harmonize the interests than a thousand lawsuits. Here matters in common could be discussed, and methods adopted which would make and preserve harmonious relations, remove prejudice, and relegate envy to the remote past. In substance we then remarked as follows:

Shakespeare very sagely remarked: "Let me not *know* that I am robbed, and I am not robbed at all." On the other hand, many *imagine* that they are robbed when they are not robbed at all!

Some persons think of the bees that they are robbers—and they openly charge them with robbing the clover fields of something, so that the clover does not make good hay, etc., but the facts are the very reverse.

Bees are of great advantage to the clovers as well as to other bloom, and without their aid in fructifying the flowers, many a plant would cease to bloom—and even to *live!* They absolutely require the visits of bees or other insects to remove their pollen-masses, and thus to fertilize them. Hence, Darwin wisely remarks, when speaking of clover and heart's-ease: "No bees, no seed; no seed, no increase of the flower. The more visits from the bees, the more seeds from the flower; the more seeds from the flower, the more flowers from the seeds." Darwin mentions the following experiment: "Twenty heads of white clover, visited by bees, produced 2,990 seeds; while 20 heads so protected that bees could not visit them, produced *not one seed.*"

Here in Richland county, a few years ago, a farmer conceived the idea that the bees damaged the clover, and sued his bee-keeping neighbor for damages, because he *imagined* that his sheep did not prosper, on account of the presence of bees in his pasture.

This ignorance was a God-send to apiculture. It brought out such an array of testimony as to the great advantage that bees were to the clover fields, that now it is difficult to find many so ignorant as to claim that bees are anything but a blessing to fields and flowers—to plants, trees and bushes. They make it possible to produce large crops of clover seed, and fill the land with richest fruit. Many fruit-growers now even keep bees, not for the production of honey or wax, but for the especial purpose of fertilizing the early blossoms, thereby increasing the fruit crop.

Nature hangs out the beautiful and variegated colors, in order to call the attention of the insects. Dainty repasts are provided in the little fountains, distilled and welled up, drop by drop; and the aroma invites the bees and other insects to "come to the feast!" Why all this design in Nature? She wants their fertilizing aid? The flowers *need* the visits of the insects to carry the pollen masses from blossom to blossom, in order to fructify them, and cause the fruit to form, abide and ripen—to gladden the hearts of fruit-growers, and fill their pockets with shekels.

The horticulturist may dig, graft and bud, but what will the returns be without the labors of the bee? The Creator has provided no other means for the fertilization of flowers but the visits of insects, and there are no other insects at that time of the year to flit from flower to flower. The body of the honey-bee is wisely adapted to this purpose, being covered with fine hairs, invisible to the naked eye, which brush off and carry the fertilizing powder to the germ that requires it. The fruit sets better even when the tree has perfect flowers, containing both pistils and stamens, if pollen from another flower, or better, still, from another tree, is brushed upon its germs. Who has not observed that a long-continued rain-storm, occurring during fruit bloom, and preventing these little messengers from their rounds, is followed by a failure of fruit ?

The bee-keepers and horticulturists should, therefore, always be fast friends —their interests are linked together in a way which should make them "brothers, all !" The prosperity of the one aids in the advancement of the other !

We have written this out because the Secretary of the Horticultural Society requested us to do so, so that it may be published in the State Reports, which are printed and circulated among all the horticulturists of the State.

In this way it will be more useful in bringing facts to the notice of many who never see any bee-periodical, and if they did, would perhaps have no interest in perusing it.

When light and truth enters the human mind, they drive away much of the foolish opposition and disagreeable feeling which is born of envy, and flourishes most among the uninformed and easily-persuaded people, who think that their rights are invaded, or their revenues decreased by some other vocation.

Mr. A. Barnes, a horticulturist located at Waupaca, Wis., said that he was so sure that the bees were highly essential to fruit, that he would gladly lease, free of charge, to a bee-keeper, a place for an apiary near his orchards—and he would be well paid by the bees in the extra amount and quality of his fruit. Here is a nice opportunity for mutual pleasure and profit.

☞ The report of the Wisconsin State Convention will be published as soon as it comes from the Secretary.

National Bee-Keepers' Union.

At the Convention at Madison, last week, we were called upon for an address on the work of the National Bee-Keepers' Union. We recited in detail the work of the Union, and what it had accomplished, and then replied to the question on the programme, "Why do You Not Join the Bee-Keepers' Union ?" in this language :

It is often asked WHY bee-keepers do not *en masse* join their own Union, but as yet no one has solved the problem ! Such an organization is a mountain of strength to the pursuit in general—a tower of defense !

The annual fee of one dollar is so small that there can be no reasonable excuse for any one remaining outside—the only word that can convey the exact condition of affairs is *apathy*. It is a kind of selfish indifference—a feeling of "*don't care*, as long as I am left alone." Is it not quite time to

Shake off dull sloth, and early rise
To make so small a sacrifice ?

Admit that you do not personally need the protection which the Union endeavors to give, is it not the duty of every apiarist to assist in upholding the pursuit, and secure to its devotees their rights and privileges ?

The ignorant and jealous often make a charge against the bees—that "they eat the peaches," and "they destroy young ducks !" The envious declare that they destroy their sheep pasture, ruin their grapes, and sting their operatives. None of us know who may be assailed next. If you want the Union to defend you in your rights, you must become a member of it.

At the conclusion of our address, 12 new members were added to the list for 1891.

We Club the American Bee Journal and the Illustrated Home Journal, one year for $1.35. Both of these and Gleanings in Bee Culture, for one year, for $2.15.

Only a Few complete volumes for 1890 are on hand. If any one desires to have a full set of numbers for binding, they should be sent for soon.

Sugar, Honey, and the Tariff.

To honey-producers this is a subject of much interest. All want to know what effect the new tariff on sugar will have on honey. Mr. F. B. Thurber, who is well-posted on such matters, wrote the following letter to the New York Convention at Albany, last month:

> After April 1 the present duties on foreign sugar, which average 2¼ cents per pound, will no longer be imposed, and a bounty of 2 cents per pound will be given to domestic producers of sugar, which include the cane sugar of Louisiana, the sorghum and beet sugar of the Western States, and the maple sugar of the East. This will undoubtedly stimulate production in these lines, increase the supply of sugar, and largely decrease the price, although, with low prices, consumption will be larger, and there will be doubtless more or less fluctuation in price due to this cause.
>
> Just how much lower sugars will be on April 1, than they are at the present time, it is impossible to say; but probably not less than 1½ cents a pound, or (say) about 4½ cents a pound for granulated sugar at wholesale.
>
> What influence the cheapness of other sweets will have upon the consumption of honey, it is a difficult thing to estimate. Honey is an article distinctive in character, appearance and flavor. People who are accustomed to using honey, want honey, and will have it, unless prices should be held at an exorbitant figure; but as cheap sugar will undoubtedly stimulate the production and consumption of attractive fruit preserves in this country, just as it has done in England, and the manufacturers of these preserves will undoubtedly continue to advertise and push them, it will have some influence on the consumption of honey.
>
> I would advise a continuance of the same intelligent study of the business that bee-keepers have given it in the past. I know of no line of business that has received more careful or studious attention than has your business, during the past few years. Every suggestion made by distributors of your product, tending to make it more attractive and convenient for consumers, has been met, and the little busy bee has been educated to work in a form calculated to extend the consumption of its product.
>
> F. B. THURBER.

The report of the proceedings of the first session may be found on page 222, and the rest of the report will follow as soon as received from the Secretary.

The Salvation Army has caught the bee-fever. Its late meeting in Chicago was thus reported in the *Tribune:*

> Mr. Booth's speech was a warm one, and at its conclusion the army burst out with: "We shall win America over." Capt. Kantahella, the long-haired convert from Ceylon, was next introduced. He sang a song.
>
> Lord Ranta Pala, the laughing little Buddhist ex-priest, gave his experience, and he sang a hymn he used to know in Ceylon. "The frogs living on the pond do not know the beauties of the lilies on the banks, but the *bees* come from the far jungle to rest upon their petals."
>
> "I used to be a frog," said Lord Ranta Pala, "But now I am converted into a bee, a hallelujah *honey-bee.*"
>
> "You know the cocoanut," said his lordship, "it is black outside and creamy white within. I am a hallelujah-cocoanut. I want to ask you a question: how many of you are white inside?"
>
> "Amen," said the army, and the meeting closed with a volley.

If you have a desire to know how to have Queens fertilized in upper stories, while the old Queen is still laying below—how you may *safely introduce* any Queen, at any time of the year when bees can fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact, everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and is as interesting as a story. Price, bound in cloth, $1.00. For sale at this office.

Convention Notices.

☞ The Convention of the Eastern Iowa Bee-Keepers, will be held in the Dobson Town Clock Building, at Maquoketa, Iowa, Feb. 11, 12.
FRANK COVERDALE, Sec., Welton, Iowa.

☞ The 8th semi-annual meeting of the Susquehanna County Bee-Keepers' Association will be held at Montrose, Pa., on Thursday, May 7, 1891.
H. M. SEELEY, Sec., Harford, Pa.

Supply Dealers desiring to sell our book, "Bees and Honey," should write for terms before issuing their Catalogues.

Pure Food and Congress.—There is a bill pending before Congress known as the Paddock pure-food bill. Its author, Senator Paddock, says:

> It will not throw a straw in the pathway of any honestly conducted business. It is aimed at fraud and deception only. Its object is to protect the public against adulteration, honest manufacturers against dishonest competition (which the bill makes illegal), and to extend the export trade of the country by definitely fixing a standard for our export products. In my judgment it will be of very great benefit to every reputable industry engaged in the manufacture of food products or of drugs.
>
> The strong features of the bill in my opinion are the clear definitions of what shall constitute adulteration under the law, the simple yet effective machinery for its enforcement, its universality of application, its unquestionable constitutionality, and the certainty that it will have back of it the support of commercial honesty everywhere throughout the country.

Upon being asked how it would affect food compounds, he replied:

> No food compound, not injurious to health, which is labeled as a compound, comes under the prohibitory clauses of the bill. The bill only requires that such articles shall be sold under proper designations, and not as imitations of other articles with a view to deceiving unsuspecting purchasers. It thus interferes with no trade-marks or proprietary articles known under distinctive names in commercial transactions. In addition the pure-food bill provides against the fallibility of science. It allows appeals to the courts from the official tests of the chemical division of the department of agriculture, and provides legal and scientific safeguards against possible errors in the application of its provisions to trades. There are no obnoxious revenue stamps, no complicated machinery of spies and needless provisos of tagging, stamping and registering.

◆

The Prospect for a good honey crop next Summer is thus commented upon by Mr. C. H. Dibbern in the *Western Plowman* for last week:

> The very dry weather we had during the late Fall has been inimical to the honey prospects for the next season. Still I do not think that the white clover is seriously injured. The trying time for clover comes in February and March, and it is never safe until Spring has come to stay. A good honey crop is not assured, even then, as we found out last year. I have about come to the conclusion that the honey crop depends more on the weather and state of the atmosphere while it is being gathered than any other one thing. I have also observed that the prospects for a crop are usually better after a poor season than after a good one. So let us all take new hope and do our best for 1891, and trust to the weather and bees for the rest.

◆

The Iowa State Horticultural Society held its 25th annual session at Des Moines, Iowa, on Jan. 20-22, 1891. The meeting was largely attended by leading fruit-growers in Iowa. From the *Independent* of Forest City, Iowa, we copy the following:

> Many important and practical questions were freely discussed with marked ability by experienced horticulturists.
>
> The subject, "Friends and Enemies," was handled with skill, power and ability by our neighbor, Hon. J. M. Elder, of Concord.
>
> The President of the Society, Hon. Eugene Secor, of our city, presided with dignity and honor. Towards the close of the session, Mr. Secor was unanimously re-elected President of the Association for the ensuing year, which was a compliment worthily bestowed.
>
> The President of the Society delivered his annual address on Tuesday evening, in the presence of a large, intelligent, and appreciative audience. The address was able and comprehensive, and showed that our townsman was familiar with the subject of horticulture in Iowa, and the manner in which he handled this theme clearly proved his ability and vast research in this rapidly-increasing and important industry.

◆

Bee-Keeping for Profit, by Dr. G. L. Tinker, is a new 50-page pamphlet, which details fully the author's new system of bee-management in producing comb and extracted-honey. and the construction of the hive best adapted to it—his "Nonpareil." The book can be had at this office for 25c.

◆

Supply Dealers should write to us for wholesale terms and cut for Hastings' Perfection Feeders.

A REMINISCENCE.

ELLA WHEELER WILCOX.

I saw the wild honey-bee kissing a rose,
A wee one, that grows
Down low on the bush, where her sisters above
Cannot see all that's done
As the moments roll on,
Nor hear all the whispers and murmurs of love.

They flaunt out their beautiful leaves in the sun
And they flirt, every one,
With the wild bees who pass, and the gay butterflies,
And that wee thing in pink—
Why, they never once think
That she's won a lover right under their eyes.

It reminded me, Kate, of a time, you know when,
You were so petite then,
Your dresses were short, and your feet were so small.
Your sisters, Maud, Belle
And Madeline—well,
They both set their caps for me, after that ball.

How the blue eyes and black eyes smiled up in my face!
'Twas a neck and neck race,
Till the day when you opened the door in the hall,
And looked up and looked down,
With your sweet eyes of brown,
And you seemed so tiny, and I felt so tall.

Your sisters had sent you to keep me my dear,
Till they should appear,
Then you were dismis'd, like a child in disgrace,
How meekly you went!
But your brown eyes, they sent
A thrill to my heart and a flush to my face.

We always were meeting some way, after that,
You hung up my hat,
And got it again when I finished my call.
Sixteen, and so sweet!
O those cute little feet!
Shall I ever forget how they tripped down the hall?

Shall I ever forget the first kiss by the door,
Or the vows murmured o'er,
Or the rage and surprise of Maud-Belle? Well-a-day.
How swiftly time flows!
And who would suppose
That a bee could have carried me so far away?

Queries and Replies.

Covering for Frames.

Query 752.—What is the best covering for brood-frames?—Mich.

I like a pine board.—**C. C. Miller.**

The hive cover, made of a single board.—**R. L. Taylor.**

A board cover with a bee-space under it.—**C. H. Dibbern.**

A plain board with bee-space between.—**Eugene Secor.**

I prefer the enameled cloth for this climate.—**P. L. Viallon.**

I use burlap, and consider it the best covering.—**J. M. Hambaugh.**

I use common burlap. This answers every purpose.—**J. P. H. Brown.**

A plain, flat board, well cleated on the upper side to prevent warping.—**James Heddon.**

I prefer heavy muslin; putting on new when preparing for Winter.—**Mrs. L. Harrison.**

I do not know; but I use enameled cloth, and I like it the best of anything I have ever tried.—**A. B. Mason.**

In Summer we use an oil-cloth and straw mat. In Winter we use a straw mat or cushion.—**Dadant & Son.**

Enameled cloth is the best thing with which to cover brood-frames; if you use a cover besides the roof.—**H. D. Cutting.**

If you mean for Spring, Summer and Fall, a pine board not less than ⅝ of an inch thick. In Winter, some sort of cushion.—**M. Mahin.**

I use a piece of burlap or old carpet, and then 6 or 8 inches of forest leaves, pressed lightly down. I assume the question refers to wintering.—**J. E. Pond.**

Sections, with the bees just capping the nice, white honey in them. Oh! Excuse me. Perhaps you meant in Winter. If so, then a sawdust cushion is good.—**G. M. Doolittle.**

A board, except in Spring. Then a chaff cushion made of common sheeting and filled with chaff, sawdust, etc. A piece of sheeting, burlap, or old carpet between the frames and cushion keeps the latter neat.—**A. J. Cook.**

A thin board, say 5/32 of an inch thick, cleated at the ends. The boards that I use are made up of two or more thin boards cleated at the ends. With very strong colonies, it is best to raise these boards up a little at one end, to give good Winter ventilation; the packing to be put on top. This applies to the use of Winter cases in out-door wintering.—**G. L. Tinker.**

If you mean for the year around I should say twilled cotton cloth. If for Summer use, I say enameled cloth. For Winter, I would prefer a piece of woolen carpet. Some good bee-keepers simply use the hive cover, arranged so as to just leave a bee-space above the tops of the frames. I do not like this arrangement, because the bees are sure to glue the cover fast, and make it come off with a snap; besides bees are a nuisance when sticking to the underside of a hive-cover. Still the plan has some advantages of its own.—**G. W. Demaree.**

Topics of Interest.

Errors Respecting Foul-Brood Exposed.

S. CORNEIL.

On pages 326, 518 and 726 of the A. B. J. for 1890, are three articles by Mr. C. J. Robinson, on Foul-Brood. These articles contain several serious errors, which, to say the least, will tend to create confusion of ideas, on a subject not generally well understood. I purpose correcting some of those errors, but instead of advancing opinions of my own, I shall quote from the writings of recognized authorities, believing that this will be more satisfactory to the reader.

Error No. 1.—Mr. Robinson says "I was the first who pointed out in 1882, that foul-brood was the result of bacteria." On page 172 of the B. B. J. for 1880, in an editorial on foul-brood, I find the following: "Its cause was reported in the *British Bee Journal*, Vol. II, 1874, wherein it was shown to be owing to the presence and growth of micrococci in the larvæ of the bee." This discovery was made by Cohn. A full account may be found in Pestluft and Faul Brut, by P. J. Liska, 1876. The honor of priority of discovery belongs to the scientist, Dr. Cohn.

Error No. 2.—Mr. Robinson says: "When certain conditions are present, fermentation occurs spontaneously," also, "Bacteria or microbes are generated wherever the conditions are favorable for fermentation." In Microbes, Ferments, and Moulds, by Trouessart (Vol. 57, International Scientific Series) page 66, I find the following: "Fermentation takes place wherever an organic compound undergoes changes of composition, under the influence of an organic embryogenous substance, called a ferment, which acts in small quantities, and yields nothing to the fermented substance. (Gautier.) This nitrogenous substance is regarded by naturalists, as a living being."

In his work, Floating Matter in the Air, page 346, Tyndal says: "The act of fermentation, then, is the result of the efforts of the little plant to maintain its respiration by combined oxygen, when its supply of free oxygen is cut off. As defined by Pasteur, fermentation is life without air."

Marshall Ward, in the Encyclopœdia Britannica Art. Schizomycetes, says: "The growth and development of a schizomycete (bacterium) in an organic medium results in the breaking down of the complex food material into simple bodies, which may then be oxydized and further decomposed. Such processes are known as fermentation, in the wider sense. When proteid substances are decomposed by schizomycetes, and evil smelling gases escape, the process is spoken of as putrefaction." So much for the cause of fermentation and putrefaction.

"The "little plants" which produce fermentation, putrefaction, and foul-brood, are not generated spontaneously, but owe their origin to the source which caused the existence of all animal and vegetable life.

Marshall Ward, in the article quoted above, says: "Every case adduced as one of spontaneous generation broke down," also, "No case of so-called spontaneous generation has withstood rigid investigation."

In his article on Biology in the Encyclopœdia Britannica, Huxley says: "The fact is, that at the present moment, there is not a shadow of trustworthy evidence, that abiogenesis (life originating without previous life) does take place, or has taken place, within the period during which the existence of life on the globe is recorded."

Error No. 3.—Mr. Robinson says: "All living bodies throughout are pervaded by animalcules—spores or minute seeds—and perchance they are vivified by some abnormal condition that fosters hatching into microbes," also, "The moment life is extinct, the spores begin to ply their role, hatch into microbes, etc."

This is the theory held by those who oppose the germ theory of disease. They say the presence of microbes in the tissues, in disease, is a secondary phenomenon, a result of the disease, and not its cause. The advocates of the germ theory meet this by proving that spores or microbes have no existence in the tissues of healthy animals. The amusing part of it is that Mr. Robinson takes both sides of the question.

On page 392 of the *British Bee Journal* for 1887, the editor says: "The experiments of Drs. Ferrier and Sanderson show that bacteria do not normally exist in the fluids and tissues of the body, but their occasional presence in animal fluids may be traced to external surface contaminations." Trouessart, already quoted, says, page 172: "Pasteur has shown that they (microbes) are not found in the blood of a healthy man."

In regard to the microbes "plying their role the instant vitality ceases to exist," Trouessart says, page 235: "Some hours after death, all corpses contain microbes, which have penetrated into the blood, owing to the softening of the tissues, and which either come from the external air, or from the digestive canal." On page 292, he says: "It is however now known that when dead bodies are protected from air germs, they do not putrefy, but become mummies. Such is the case with the bodies which have been preserved for several centuries in the crypt of one of the churches of Bordeaux, and which, without any antiseptic preparation, have gradually passed into the state of mummies."

Mr. Robinson's experiment, by which, as he says, he "originated" foul-brood in 1882, is easily explained. He unintentionally left some combs of brood exposed, out of the hive, till the larvæ died. When the resistance of the living tissue cells ceased, the spores of bacillus alvei, floating in the air, made a lodgment, and found in the dead larvæ a congenial medium for their multiplication and growth. That the germs of foul-brood do seize upon and multiply in larvæ which have died from other causes, seems to be the unanimous opinion of the leading bee-keepers in Germany, Switzerland, England, and America, who have expressed themselves on the question. The temperature of midsummer would be high enough, and the combs being protected from drying, there is little doubt that Mr. Robinson had a case of genuine foul-brood propagated outside the hive, but not as the result, as he supposes, of spontaneous fermentation, which, as I have shown, never takes place, nor as the result of the 'vivifying' of the 'inherent' spores, which, as has been demonstrated, had no existence in the healthy living brood.

Error No. 4.—Mr. Robinson says: "The microbes, though deadly poison to brood, cannot harm fully fledged imago bees."

Writing on foul-brood in the AMERICAN BEE JOURNAL for 1887, page 549, Prof. McLain says: "I found old bees honey combed with bacteria." Hilbert found them in mature queens and worker bees. Schoenfeld also found them in adult bees. The *British Bee Journal* of the 12th inst. contains a translation, from the *Revue Nationale*, of a paper on foul-brood, by Dr. Lortet. This is one of the most interesting papers which has lately appeared. He has dissected bees extensively under the microscope, and is quite clear as to the infection of mature bees. Perhaps the editor of the AMERICAN BEE JOURNAL may see fit to publish the paper in full.

When several veracious and trustworthy men make observations, independently of each other, and agree in saying that they have seen the bacillus of foul-brood in mature bees, their evidence is more reliable than the opinions of those who merely infer that adult bees are not affected by the disease.

In a letter to the late Wm. Raitt, published in the *Bee-Keepers' Record*, of which the following is an extract, Frank Cheshire says: "Those who have no microscope, or who lack the needed skill for an examination, must see through other's eyes. I have again and again, in dozens of instances, seen queens saturated with the disease, though the majority perhaps in diseased stocks are sound. If, after these assertions, others proclaim that queens have an immunity, I only ask how they prove their negative, and on what grounds do they doubt those who have no interest to serve but truth." I think it is high time that we heard the last of the statement that the bacillus of foul-brood does not affect mature bees.

In the 13 columns covered by Mr. Robinson's articles there are other errors, such for example as the statement that foul-brood is not a disease, the statement that consumption is not contagious except by inoculation, the statement that corrosive sublimate may be used as a spray for combs containing diseased brood, when it is known that any more than one-fourth of the quantity required to sterilize a litre of broth will kill a man, and others, which want of space prevents me from dealing with at present. I trust the foregoing will be sufficient to put the readers of the AMERICAN BEE JOURNAL on their guard, and to cause them to take Mr. Robinson's statements, on the foul-brood question, with a modicum of salt.

P. S.—Since writing the above I have seen Mr. Robinson's article, page 73, but as there are no new points of importance, I shall not refer to it any further at present.

Lindsay, Ont., Jan. 27, 1891.

Haldimand Bee-Keepers' Convention.

The annual meeting of this Association was held in Cayuga, Ont., Jan. 24, 1891, President Rose in the chair. Minutes of the last meeting were read and adopted.

The election of officers was then held, when the following were elected: President, Israel Overholt; Vice-President, Robert Coverdale; Secretary and Treasurer, E. C. Campbell; directors, Owen

Fathers, Jas. Brooker, J. H. Best, Jas. Armstrong, Wm. Kindree, M. Richardson and John Bell. It was voted that this Association affiliate with the Ontario Bee-Keepers' Association. Carried.

OUT-DOOR VS. CELLAR WINTERING.

Mr. Armstrong favored out-door wintering in clamps and chaff hives. He never wintered his bees in the cellar, as he did not think his cellar was suitable. He thought the best and cheapest "clamp" was one that would hold two rows of hives, facing north and south, with chaff or sawdust packed around the hives.

Mr. Schisler had wintered his bees in the cellar, but preferred out-door wintering in "clamps."

Mr. J. H. Best did not favor cellar wintering, on account of dampness.

Mr. Kindree thought the tenement hive was the best for Winter.

HOW TO PREVENT BURR-COMBS.

This subject was discussed by Messrs. Armstrong, Rose, Kindree, and others, and the conclusion arrived at was that proper spacing of frames in the brood-chamber, and about ¼ of an inch between the brood-chamber and the supers would obviate the difficulty, to a large extent.

It was voted that the next meeting be held at Nelles' Corners, on the third Saturday in May.

E. C. Campbell, *Sec.*

Trade-Mark for Honey.

J. F. LATHAM.

It is somewhat gratifying to learn that the hints in my article on extracted-honey, on page 167, Vol. 26 of the Bee Journal, in regard to a Trade-Mark to be used by bee-keepers, as a preventative of the adulteration of the fruits of their industry, are beginning to attract favorable notice from those whom they were intended to reach.

With the support of such advocates as those who supplemented the introduction of the idea at the Michigan State Bee-Keepers' Convention on Jan. 2, coupled with the enterprising push of Mr. Heddon, their materialization, objectively, might as well be considered accomplished.

It is an idea that I have been burdened with much of the time since I have had honey to sell. The sensation experienced in having the assertion, "You make it," flung in one's face while trying to establish a trade with a grocer, or sell a transient customer a section of honey in the comb, or a bottle of extracted-honey so clear, and pure, as hardly to be discernable through the glass that held it, when not granulated; and that, too, sometimes, in the face of the fact of a can of stuff that would leave the disagreeable effects of its compounds in the mouth and throat for hours after being eaten, are not at all times pleasant. Such has been my experience many times when invited by a retailer to "Taste of some honey (?) as good as yours, that I bought for 6 cents a pound."

Now, that an attempt to stop the nefarious practice, perniciously exercised in contaminating the products of the apiary, has been started in the right direction—right from the fact that it seems the only direction to attain a result commensurate with the importance of the undertaking in a dual capacity, that of protecting the producers and consumers of honey—the effort should be vigorously backed by every bee-keeper who produces honey to sell. The enterprise is one in which the producers are most concerned, directly and indirectly. *Directly* concerned, from the fact that a *bona fide* stamp on a package of honey from first hands, guaranteeing its quality, would enhance its value in the estimation of the factor, influence a more ready sale at a better and more staple price, and beget an assurance that it could be recommended to consumers, and bought by them with a confidence in its merits. *Indirectly* concerned, by having the advantage of precedence in trade for packages of honey bearing the Association Trade-Mark.

With the hints embodied in the foregoing, elaborately consummated, and their interpretation vigorously applied, it would be a laborious and non-remunerative task for A, B and C, to establish factories in back-alley tenement-cellars, and evolve from the noxious materials of their craft, the many compounds, with seductive appellations, that may be found on the market. The delight (?) manifested by such fellows, when Uncle Sam takes them by the ear, is seldom inefficient in its influence on their more respectable co-workers in iniquity.

It seems that the Trade-Mark should be the *bona fide* property of the Association, but vested in individual ownership represented by a member of the Association, and the right to its use, transferable to any other member, to be used in a prescribed manner, subject to the advice and consent of the executive branch of the Association. This would give any member all the privileges necessary in his business of preparing honey for the market. Should he desire to sell his business to another member, he could do so, and also assign to him the right to use the Trade-Mark.

All cases of infringement should be prosecuted at the expense of the Association, and only with the consent of its executives. Expenses of transfer from one member to another, should be borne by the one making the transfer, etc.

It seems that a device for the Trade-Mark should be something emblematical of the craft it is intended to represent. An hexagonal shield of honey-comb, bearing the figure of a honey-bee—a queen or worker (the worker would seem to most appropriately represent the object of the device)—surrounded by a wreath of the most prominent honey-bearing flowers (the white clover, linden, etc.,) with a cluster of golden-rod conspicuously displayed, would be comprehensive. For a legend, "American Bee-Keepers' Protective Union," or, *Pro bono publico*, would fill the bill; the first would be the most definite, while the latter would concisely illustrate the object of the device, for it is certainly no other than the public good that incites apicultural enterprise.

Cumberland, Me., Jan. 26, 1891.

New York State Bee-Keepers' Convention

GEO. H. KNICKERBOCKER.

The 22d annual convention of the New York State Bee-Keepers' Association was convened in Agricultural Hall, Albany, N. Y., on Jan. 22, 1891, at 2:30 p.m.

President P. H. Elwood called the convention to order, after which Thos. Pierce, of Gansevoort, formally opened the session with an invocation of the Divine blessing.

The Secretary then called the roll, and about 25 members responded.

On motion, Thos. Pierce was elected Treasurer *pro tem.*, after which occurred the reception of new members, and the payment of annual dues.

The report of the Secretary was then read, adopted, and ordered to be placed on file.

It was decided to omit the reading of the minutes of last meeting, as they had been published in pamphlet form, and a copy sent to each member.

The first essay was by Thomas G. Newman, of Chicago, Ills., on "Exhibits of Bees and Honey at Fairs."

G. H. Ashby—There is to be a great fair held at Chicago in 1893, and we should see that our State is well represented. I think, as bee-keepers, we are entirely too modest. We are a branch of agriculture, and ought to ask for our share of the money.

R. Bacon—I for one would be in favor of making an effort to get an appropriation large enough so that New York would make a creditable showing of bees, honey, and everything connected with apiculture.

Thomas Pierce said that New York State ought not to be second to any. She has many of the most extensive bee-keepers, and produces some or the finest honey in the world, and, if rightly undertaken, could make as fine a showing as any other State in the Union.

G. H. Ashby—We do not want to ask for a small appropriation. We should ask for a good round sum. If we do not ask for it, we will not get it.

I. L. Scofield—My memory runs back to some 20 years ago, when I was in company with Wm. Hoge. He said there would never be any finer honey produced than was gathered in Central New York. They get some very fine honey in Cuba, from the bell-flower. It is as white as any honey we gather, and of fine flavor, but it has never injured our New York markets.

N. D. West—The same man presented me with some of this honey. It was selling for 5 cents per pound; ours was selling for one-third to one-half more, and our State honey was taken in preference every time.

E. R. Root—I have a warm feeling for all the New York bee-keepers. I should say, by all means, have an exhibit at the Columbian Fair. I think New York State produces as much or more honey than any other State except, perhaps, California, and that your honey is as good in quality as any, except the alfalfa. Your State should have a good large appropriation, and then they could make as large and fine a display, and perhaps larger, than any other State.

A motion was made by I. L. Scofield, that a committee of two be appointed to secure the appropriation necessary for making a creditable exhibit at Chicago, in 1893, the President to name the committee to-morrow. Carried.

Honey plants were then discussed.

N. D. West—I once sowed 20 acres of sweet clover, preparing the ground the same as for other clover. The next year I visited the field, and found just one stalk growing. I believe that it does best by the roadside, or on the banks of creeks.

Chas. Stewart—Three years ago I went to visit a field of alfalfa. There was a little sweet clover near, that was full of bees, but I did not find a single bee on the alfalfa. The man who owned the field told me that it made the best kind of hay if cut early.

P. H. Elwood—It grows well, but does not secrete honey, in the East.

G. H. Ashby—Under very favorable circumstances I have found bees on alfalfa.

Thos. Pierce—Is there any one present who has had experience with the Chapman honey-plant?

G. H. Ashby—Two years ago I sowed about 10 bushels in the hulls—there must have been 2 or 3 bushels of seeds. I find that only a few seeds have come up, and I do not believe that it has paid me to sow them.

R. Bacon—I sowed a little piece of good land to the Chapman honey-plant; the bees worked nicely on it; never saw a plant that the bees worked better on. I was very much pleased with it, but could not afford to cultivate it, as it does not blossom the first year.

J. H. M. Cook—It will not grow to amount to anything when scattered in waste places in early Spring; it must be cultivated.

G. H. Ashby—Sweet clover is not a noxious weed; it will not grow in cultivated fields. It is very easy to eradicate, as it will not survive the mowing machine.

P. H. Elwood—The Chapman honey-plant is a hard plant to grow. Sweet clover grows spontaneously. I do not believe that it will pay to sow seeds for honey alone, but if we can sow Alsike clover, and get a crop of honey and then a crop of hay, that will pay well.

J. H. M. Cook—I can recommend Alsike clover. I am sowing it instead of red clover. It is as sure to yield honey as the white clover, and of as good quality. It does not yield as large a crop of hay as the red, but of a much better quality.

N. D. West—Sweet clover is one of the best honey-plants we have in Schoharie county. We have a great quantity of it, and almost always get a good yield of honey from it. I believe it would pay to seed cheap lands with it, if it could be made to grow.

I. L. Scofield—I have one bee-yard where there is plenty of sweet clover; the bees work well on it, but never gather much surplus from it.

W. L. Coggshall suggested that the atmosphere was not right for it to secrete honey.

I. L. Scofield—I like Alsike clover very much, both for hay and pasture. In some years, when red clovers are all killed out on our wet lands, the small, fibrous roots of the Alsike will hang, and produce a good crop of hay.

D. H. Coggshall—Alsike clover grows well on our land; it makes good hay, and I consider it one of the best plants we have for white honey—next to basswood.

G. H. Ashby—With us, it is an excellent honey-plant, but the farmers are going back on it. One reason is, they began sowing it for seed, some years ago, when it was very high. In a wet season it rots badly, and is not as profitable now as then, and there is but little aftermath.

G. H. Knickerbocker—We have seeded from 10 to 40 acres with Alsike every year since 1882. It has failed to secrete honey only once during that time, and then white clover also failed. Two seasons the bees worked on it vigorously, when they scarcely noticed white clover. I consider it a better honey-producer than white clover. It makes the best fodder for sheep or milch cows that we can raise, but should be sown with red clover and timothy to give the best results, both for honey and hay, as it lodges badly when sown alone.

Convention adjourned until 7:30 p.m.

Premiums for Honey at Fairs.

R. M'KNIGHT.

Many thanks, Mr. Editor, for your kindness in publishing my note in the BEE JOURNAL concerning prizes for honey at Fairs, and for the trouble you took in procuring replies.

Mr. Hutchinson's answer is just what I expected it would be. The experience of the other two is probably like his.

For some years past there has been no prizes given for apiarian supplies at the Toronto Fair, except for new devices, and no prizes for bees or queens. I am myself largely responsible for this state of things.

Several years ago the manufacturers who exhibit at this Fair, agreed among themselves that it would be better to discontinue the awarding of prizes, and allow their wares to be judged on their merits by the public.

Shortly after this, I spoke to Mr. Jones (the largest supply dealer in our Province), and asked him if it would not be well for the apiarian supply dealers to fall into line with the other manufacturers in the matter of prizes. His opinion was that it would be better to do so. Thereafter, prizes for their output were dropped from the list. As bees are no longer a novelty to the general public; are sometimes an annoyance to the people on a crowded Fair ground, and their transport inconvenient and expensive, it was thought best to leave them off the list, also. Our prize list is, therefore, confined to honey, and other things into the composition of which honey enters.

If my memory serves me right, there is not a word in the essay I wrote for the Detroit meeting about my taking prizes at honey shows. I sent two photographs of honey exhibits I had made at Toronto to the Secretary of the Association, and a note explanatory of those photographs, in which I incidentally mentioned the prizes awarded them, and expressed the belief that the amount of these prizes had not been exceeded by any one for a single exhibit of honey. I felt that this note might, or might not, be read to the meeting—it was personal throughout. Judge of my surprise on reading the report of the Detroit meeting, and finding that my essay had not elicited one word of discussion, but that several gentlemen promptly took exception to the correctness of the opinion I hazarded as to the prizes.

Now, Mr. Editor, whatever other people may think, I do not believe I am at all thin-skinned, but the facts as stated lead me to believe there is a good deal in the position Dr. Miller takes, respecting the use of essays at conventions. The theory is that they are to serve as the basis of systematic discussion upon the subjects they introduce, but when the author finds they are read—mayhap to an audience made restive under the infliction—and put aside in silence, he is forced, of necessity, to one of two conclusions, viz.: That the position he takes, and the reasons he adduces, are so strong, and the grounds he occupies so completely covered, that there is no room for discussion. But this is not consistent with the theory that an essay is only an introduction to the subject being enlarged upon. The other conclusion is, that the views expressed are not considered worthy of criticism, nor the suggestions made worth discussing. A modest man will be apt to find himself impaled upon the sharpest horn of the dilemma.

Perhaps the remedy for the alleged surfeit of essays at bee-keepers' meetings is to have but two or three on the programme. Or the evil may correct itself by the essay-writing bee-keepers standing upon their dignity and keeping their counsel.

Owen Sound, Ont.

[Brother McKnight now knows how to sympathize with us. We have several times spent much valuable time, and given considerable patient study upon a subject for an essay, only to have it read and passed without one word of comment. The only consolation we can find, is that the subject was so completely exhausted that discussion was totally unnecessary. We offer him this consolation in the present case.—Ed.]

Southern California Bee-Keeping.

The Southern California Bee-Keepers' Association held its first meeting for 1891, on Thursday, Jan. 8, at the Chamber of Commerce, Los Angeles.

This organization is of recent formation; nevertheless, it was evident to every one present, judging by numbers and representative bee-men in attendance, that it starts out on a firm footing. It is predicted that before the Association is a year old, its membership will be larger, and will wield a greater influence in the interest of their product than any like organization now in existence. The membership represents over 14,000 colonies of bees.

Promptly at 1:30 p.m. the convention was called to order by President C. N. Wilson, of Los Angeles. After welcoming the strangers in attendance, and stating the object of the meeting, Secretary Brodbeck was called upon to read a report of the previous meeting. Following this came election of new members.

J. F. McIntire, of Fillmore, was elected Vice-President to represent Ventura county, and J. Williams, of Tustin, as Vice-President for Orange county.

A legislative committee composed of one from each county was appointed as follows: T. F. Arundell, Ventura; C. W. Newall, San Diego; H. P. Luther, San Bernardino, and C. N. Wilson, chairman.

Executive Committee—C. N. Wilson, C. W. Abbott, L. E. Mercer, L. T. Rowley, and G. W. Brodbeck.

One of the great drawbacks to this industry is a disease called foul-brood, as the disease is considered incurable, The State law, as it now reads, affords very little protection to the bee-men, or as regards its enforcement, as it is optional with the County Supervisors to appoint bee-inspectors to look after the law's enforcement.

To remedy this C. N. Wilson reported a bill to the association that will materially alter the existing defects of the present law, and it is the purpose of the association to appeal to the present Legislature to effect a change.

The annual dues were fixed at $1.00, and the meetings of the Association to be semi-annual.

The evening session was devoted almost exclusively to the display of apicultural implements. J. G. Cory, of Santa Paula, C. W. Abbott, of Pasadena, and T. H. Hunt, of Redlands, exhibited hives and supers. The *modus operandi* of the above implements were readily explained to all present, and demonstrated beyond question that the California honey industry is being developed on scientific principles.

The meeting was a successful one, and as interesting and instructive as any ever before held on the Coast.—*Exch.*

Bees Injuring Flowers—Clover Crop.

DR. C. C. MILLER.

In reply to your call on page 167, I may say that the only cases that have come under my own observation, in which bees did any harm to flowers, was at the time of great scarcity. I had some out-door roses, and before they had time to open, the bees would tear them open, so that very few were perfect. Do not understand that this is a common occurrence. I have thousands of roses every year, and only once or twice have the bees troubled them.

One of the first flowers to bloom in the Spring is the crocus. I have seen them literally crowded with bees, and I think I have seen them slightly damaged.

I can readily imagine that bees in a greenhouse, with practically nothing to gather, might treat the flowers as they did my roses. Under ordinary circumstances, a bee will never touch a cultivated rose. I suppose the yield does not pay. The death of bees in the greenhouse, probably, was not caused by the flowers, but was simply due to the fact that they could not get out. I suppose that was the idea Mr. Lincoln meant to convey.

On page 116, Mr. Eugene Secor asks: "Will you not admit that we had as good a time at Keokuk *with* essays, as at Columbus, in 1888, without them?' Yes, only we had 2 or 3 essays at Columbus. Aside from that we had a good convention at Columbus. Look here, friend Secor, if every essay were just the kind you want, just the kind to open a discussion, I would not have a word to say. But they are not—more's the pity. See if you can get them all of that kind at Albany. I wish with all my heart you might.

FORECASTING THE CLOVER CROP.

On page 124, Mr. A. N. Draper discusses the conditions necessary to secure a crop from white clover. It is evident he has been doing some good thinking about it. He makes the point that if we know beforehand what is to be the yield from clover, we can get ready for it, knowing "how many sections to provide, how much foundation to get, what other supplies we need, and to what apiaries to take our supplies." I do not know how it may be with others, but after being caught one or two years without sufficient supplies, I have never felt safe since without making sure to be *very* safe. So I always want to have as many sections ready to put on the hives as I can possibly need in the very best season. Then, I am all right, no matter what the season may be. To be sure, if I knew beforehand that the season would be a failure, I would not need to get any fresh supplies, but I would only save by that the interest on the outlay, for those same supplies will be all right for the succeeding season. I do not need to know beforehand to which apiaries to take the stuff, for I do not care to take it until it is needed, and then I have no trouble, without making an extra trip, to take to each out-apiary supers filled with sections all ready to put on the hives. So what great difference would it make, Brother Draper, if I could forecast the clover crop, especially as it would not be a very exact forecast in any case?

You say that knowing beforehand the condition of the clover, you can make your plans accordingly, take few colonies to a place, and "start more out-apiaries." Look here, Brother Draper, you have got me—no use in trying to squirm. If you can tell in December (and you can tell then if you can tell at all) what clover will do, it would be, in many cases, a big advantage. It might help to decide whether to sell off some of our bees, and, indeed, in some cases, to move the whole business to a distant field, and such things cannot be decided after it is time to put on sections. It often happens that a man has a good sized apiary, and has some other business. He is undecided whether to give up everything else next season, and give his whole time to his bees. He could decide much more intelligently, if he could know beforehand what clover intended to do. Without doubt, other things would come up to show the desirability of foreknowledge as to this matter.

Now, the next thing is, is your theory correct? It looks reasonable. If a number, at different points, and for a series of years, will make observations, we may know something definite about it. It is worth the trouble. Indeed, if enough observers would report for a single year, we might have the thing pretty well settled. I hope, Brother Draper, that you and Prof. Cook may turn out to have been good theorists.

BEES NOT LOSING WEIGHT.

On page 127 J. A. Pearce says his bees lost nothing in weight from the last of September until the last of October, and asks if it was hibernation. Hardly. Did they gather nothing during that time? It would not take such a great deal to supply their daily wants, and there may have been, during the month of October, sources unknown from which they drew a considerable supply.

Marengo, Ills.

Vermont Bee-Keepers' Convention.

The Vermont Bee-Keepers' Association met at the Addison House, Middlebury, Vt., Jan. 28, 1891, and the meeting was called to order by President V. V. Blackmer, of Orwell.

Secretary J. H. Larrabee being in Michigan, Marcia A. Douglas was chosen *pro tem.* Report of the previous meeting was read, accepted, and adopted.

The appointments of committees by the President were as follows:

On Nomination—R. H. Holmes, M. F. Cram, and H. W. Scott.

On Resolutions—Dr. F. Bond, J. G. Barker, and E. Young.

The first topic on the programme was Planting for Honey, to be led by E. J. Smith, of Addison. That gentleman being absent, R. H. Holmes, of Shoreham, led the discussion, which was participated in by Dr. F. Bond, of Cornwall; M. F. Cram, of Braintree; H. W. Scott, of Barre; Mrs. C. G. Allen, of Shelburne; V. V. Blackmer, of Orwell; Prof. H. M. Seely, of Middlebury; T. H. Wheatley, of Burlington; and W. G. Larrabee, of Larrabee's Point.

It was agreed that there is nothing superior to Alsike clover, and that it does not pay to plant exclusively for honey-production. It is too cold in this latitude for alfalfa to be grown successfully, and all plants are more vigorous and flourish best in their special locality. Buckwheat makes good winter stores, but cross bees.

The next subject, Artificial *vs.* Natural Swarming, was also without its designated leader, and Dr. Bond was invited by the President to take it up. He, with V. V. Blackmer, M. F. Cram, and R. H. Holmes, gave precedence to natura swarming, and as little of that as possible.

Spring Dwindling not appearing upon the programme, it was suggested by Dr. Bond that it have its place, as it is of great importance just now to us all. He attributes his losses last Spring to having some hives fronting the South and East. The bees were attracted out by the sun, and the sudden changes and cold winds chilled them to such an extent that they were unable to return. Those fronting the North and West were thrifty. R. H. Holmes considered his loss the result of honey-dew stores; V. V. Blackmer to the unfavorable weather during the Spring.

Adjourned until 1:30 p.m.

AFTERNOON SESSION.

T. H. Wheatley, of Burlington, presented an essay on, Bee-Culture at the Experiment Stations.

Prof. H. M. Seely, of Middlebury, followed with an essay on, Some Agricultural Problems.

The topic next under consideration was Vermont's Apiarian Exhibition at the World's Fair in Chicago, in 1893. To exhibit or not to exhibit—that's the question. The cost was estimated, and R. H. Holmes was appointed a committee to gather all possible information regarding it, and to report at our next annual meeting.

Mr. Manum being absent, the question-box was opened by the President, who called for answers from different ones in the convention, which led to interesting and instructive discussions. Increase, Feeders, Spaces of Brood-Frames, Races of Bees, and The Coming Honey-Crop, were the principal topics.

The Treasurer's report for the past year was as follows: Balance on hand from last year, $2.75; expenses for programmes, stamps and stationery, $6.40;

balance due Treasurer, $3.65. The report was accepted and adopted.

The Committee on Nomination submitted the following report:

For President, V. V. Blackmer, of Orwell; Vice-Presidents—F. H. Walker, of Manchester; T. S. Warner, of Panton; H. L. Leonard, of Brandon; M. F. Cram, of West Brookfield; J. D. Goodrich, of East Hardwick; H. W. Scott, of Barre; B. P. Green, of St. Albans; J. W. Smith, of Stowe; and H. H. Dodge, of Shelburne. For Secretary and Treasurer, Marcia A. Douglas, of Shoreham.

Chairman on Resolutions reported:

Resolved, That while we miss the familiar faces of the Solons of apiculture, whose wisdom has instructed us, and whose counsel has been our guide in times past, we rejoice to see so many coming to assist us in our future efforts to promote the interests and advance the knowledge of this Association, and make it a success and an honor among the kindred organizations of the land.

Resolved, That we recognize, with hearty thanks, the kindness extended to us on this occasion by the Central Vermont railroad company, and by the proprietor of the Addison House, by whom we are so comfortably housed; also we extend thanks to those who have kindly read interesting essays for our instruction.

The above reports were accepted and adopted.

Receiving new members and paying annual dues completed the work until 7 p.m.

EVENING SESSION.

Affiliation with the North American Bee-Keepers' Association was considered at some length, but no decisive steps were taken in that direction.

An essay on Queen-Excluders for Comb and Extracted Honey, written by John H. Martin, of Hartford, N. Y., was read by the Secretary, as Mr. Martin was unable to be present.

This elicited discussion regarding Heddon hives, hanging-frames, etc.

An essay on Full Sheets *vs.* Starters of Foundation in the Brood-Chamber, by H. W. Scott, was also a source of interesting discussion, and led to an exchange of views on the sale of honey, etc.

Under the head of unfinished business came a report of H. W. Scott, of Barre, giving information concerning the apicultural standing in that county, obtained by his sending a list of questions to leading apiarists.

It was suggested that this Association have an informal meeting somewhere, sometime in June next, for its advancement, socially and financially.

The matter of increasing the annual dues to 50 cents was considered, and it was thought best to bring it before the Association at its next annual session. Adjourned.

MARCIA A. DOUGLAS, *Sec.*

Get Ready for the Columbian Fair.

C. THIELMANN.

I have just reached home from the Minnesota Bee-Keepers' Convention (held in Minneapolis). It was a grand success. A Constitution and By-Laws were adopted, and 30 members joined the society. The meeting was profitable and instructive, and the topics were vigorously discussed. The feeling is general that in a short time this will be one of the largest and best societies of bee-keepers in the Union.

A committee was appointed to secure an appropriation from the State for the purpose of representing the bee-industry of Minnesota in a creditable manner at the World's Columbian Exposition, at Chicago. As the committee consists of able and influential men, the prospects for success are very bright. The Horticultural Society, and other industries having secured State aid, why should not the "bees" receive recognition in the same way? They are surely of much importance, even when compared with horticulture and agriculture, for without their fertilizing aid much of the glory and profit of the former industry would be dissipated, to say nothing of the wealth they produce, which, without them, would be lost to the State.

The bee-keepers of every State should ask for an appropriation for this purpose, and together they could make the grandest display of our beloved industry ever seen in the world. No time should be lost, however, as in some States the Legislative sessions are only held biennially, and the necessary steps should be taken before it is too late. Let apiarists be up and doing in this matter while the opportunity is theirs. Allow me to endorse the remarks of Mr. Heddon concerning a trade-mark for the Bee-Keepers' Union, as reported on page 118 of the BEE JOURNAL.

Thielmanton, Minn., Jan. 24, 1891

Clubs of 5 New Subscriptions for $4.00, to any addresses. Ten for $7.50.

CONVENTION DIRECTORY.

Time and place of meeting.

1891.
Feb. 11, 12.—Eastern Iowa, at Maquoketa, Iowa.
Frank Coverdale, Sec., Welton, Iowa.

May 7.—Susquehanna County, at Montrose, Pa.
H. M. Seeley, Sec., Harford, Pa.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—The Editor.

North American Bee-Keepers' Association

President—P. H. Elwood....Starkville, N. Y.
Secretary—C. P. Dadant......Hamilton, Ills.

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National Bee-Keepers' Union.

President—James Heddon ..Dowagiac, Mich.
Sec'y and Manager—T. G. Newman, Chicago.

Bee and Honey Gossip.

Minnesota State Association.

The honey crop in this section was very light last season, and but few obtained any surplus. The local markets are bare of honey. Many colonies of bees went into Winter quarters with but little honey, and I predict a great Winter loss. I have 19 colonies in the cellar. They are very quiet, and I think most of them have plenty of stores. We have our State Association thoroughly organized with 30 members.

M. Cutler.

Sumter, Minn., Jan. 28, 1891.

◆

Fall Rains and the Honey Crop.

On page 124 Mr. Draper argues that an abundance of rain during the Fall months will insure a good honey crop from white clover the following season. The following facts prove him mistaken: In 1889 this section was blessed with plenty of rain during the Fall months, and white clover was abundant, and of luxuriant growth for that time of year. In the Spring of 1890 there was a better show of white clover than I ever saw before, and when June came it brought white clover bloom in abundance, but no nectar to speak of, and what seems most strange, the bloom lacked its characteristic aroma. Mr. Draper says: "I do not believe a drouth in July and August will affect the white clover yield of nectar the following season." Here, again, he is mistaken, as the following facts will show: In 1887 we were visited with such severe and prolonged drouth and heat during July and August that the white clover was all killed except in low, moist places. From the latter part of September to about Nov. 10, we had abundant rains, but no white clover honey the next season.

G. B. Replogle.

Centreville, Iowa.

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Patents and Property Rights.

Mr. James Heddon quotes Prof. A. J. Cook as saying that he knew that the impressions gathered by the readers of *Gleanings*, were that patents were not honorable property. I am an old subscriber to that periodical, and can truly say that I never had that impression. I know that the editor, A. I. Root, has saved his subscribers many dollars by exposing patent-right bee-hive frauds, and by cautioning his readers about going slow in purchasing patent-right hives and territory. I believe that the great majority of practical bee-keepers approve of his course, and would think it a foolish investment to purchase a farm, county, or State right for the best patented hive known. Our patent laws need a radical over-hauling for the better protection of the public, and the *bona fide* inventor. N. P. Aspinwall.

Harrison, Minn., Jan. 26, 1891.

◆

Bees for Honey, Not for Money.

I think this Winter will thin out the bees very materially in this locality. I have kept bees for the last 30 years, but have no recollection of so poor a season as the last one. All late swarms that have not been fed will have to go; and not very late ones either—say, after July 1. I tried to feed some of mine by placing frames filled with honey in supers, after having shaved the caps off with my honey-knife, thinking they would store it below; but they were very slow about it. It seemed that they just lived on it then, and took no thought for the future. The weather being cool most of the time was, perhaps, partly the cause. They bred very sparingly—not enough to repair the death loss—so that cold weather finds them too weak to keep up the necessary warmth. I have lost 3 colonies by this dwindling process. I put 9 into winter quarters, 2 of which are now dead. I have never had more than a dozen colonies at any one time, and never desired more. That was more than I had time to attend to, when I was on the farm. Since I have left the farm I have not had room to enlarge without building a honey-house and a winter repository, which, at my age (66), seems hardly advisable, as my eye-sight is getting too poor to manipulate bees. I have heretofore kept bees for honey, and not for money. I have been able to furnish my table, and have a little to sell nearly every year. This, with the satisfaction of having them around and seeing them work, has been reward enough for me. I might, perhaps, have obtained better results the past season if I had, as they dwindled down, united them. The weather was cool a good deal of the time, and they were very irritable it seemed, and no amount of smoke would quiet them, and when it was warm enough for them to fly, as soon as I opened a hive, it was a signal for a general raid from all the colonies in the yard. J. C. ARMSTRONG.

Bromley, Iowa, Jan. 27, 1891.

Favors a Trade-Mark.

The question about the Union adopting a trade-mark, is an interesting one, and I am heartily in favor of it, as I never did believe in selling honey without the producer's name and address upon the package, and would suggest, as a trade-mark, a flower with a bee upon it. Regarding the admission of applicants to the Union, Mr. Heddon says no one having trouble on hand, or trouble brewing, should be admitted to the Union. How is any one to know how much trouble may be brewing for him? I think that would be a hard question to answer. JOHN BURR.

Braceville, Ills., Feb. 1, 1891.

[You are right. Mr. Heddon evidently meant any one having litigation in sight. That is the construction put upon it by the General Manager when admitting members.—ED.]

A Warning Note.

The BEE JOURNAL is now a much better shape for binding. Who would attempt bee-keeping without it? The bees themselves should remonstrate against the owner of a colony who is too selfish or stingy to pay for a bee-periodical. If I were a queen, I would give instructions to my 40;000 workers, the morning we take leave of our mother hive: "Fly lively, sting the old miser, cluster on the top of the highest tree possible; when the hive is prepared, and all is in readiness, break ranks, hie to the forest, clean some old hollow tree, and prepare for work. We will then collect our sweets, store them as best we can, and run our own apiary. If we stay with him our chances for long-life are slim,for if Nature does not supply a full flow of nectar, and we are not able to store 100 or 200 pounds of surplus for his share, he will take from our brood-chambers, leaving us just enough to starve on during the first Winter." A. B. MAN.

Renovo, Pa., Jan. 24, 1891.

Well to be on the Safe Side.

I cannot see why bee-keepers are so backward about joining the Union. I have no growling neighbors, but generally distribute a little honey among the nearest of them, and everything is lovely—never hear any complaint, and think it will not be necessary for me to ask help from the Union, but would rather be on the safe side.

JESSE BRADY.

Little Rock, Ills., Jan. 24, 1891.

Loss of Weight in Winter.

In November, 1888, I put 82 colonies of bees in my cellar, weighing the brood-nest of each colony. I again weighed 42 of them, when I set them on the Summer stands, in March. The greatest loss in weight was 22 pounds, and the least was 4½ pounds. The others ranging all the way between. They all came out in good condition, and why there was so much difference in the loss I cannot explain. O. B. BARROWS.

Marshalltown, Iowa, Jan. 25, 1891.

To Italianize an Apiary.

In answer to A. J. Duncan's inquiry, on page 130, I would say that for one of little practical knowledge, the easiest simplest, and, taking everything into consideration, cheapest way of Italianizing an apiary of 40 colonies, is to buy 40 Italian queens and introduce them. Instructions as to introducing will be sent with the queens by the parties selling them. I would rather wait until warm weather—August is preferable—as queens are cheaper then than at any other time of the year. If no honey is gathered, do the work at night, with a lantern, or there might be trouble from robbers. The difficulty with beginners, and black bees, is to find the queens, especially when working at night. Here is a very easy way of finding them: Get a queen-excluder so constructed as to fit exactly the top of your hives, put it on the hive to be operated on, put on the excluder a super with empty sections. The whole must be fixed so that no bee can get out of the hive, except through the perforated zinc or the entrance, and so that a bee space will be left between the combs below and the zinc, and also between the zinc and the sections. Smoke a little through the entrance, drum on the hive, smoking and drumming alternately until about one-third of the bees are in the super. Do not be in too great a hurry, but give them time to get in the super. Then take off the super, raise the queen excluder, look sharp, and you will find the queen under the zinc, trying to get through the holes. I have tried the excluder without super, or with a box above, but did not succeed as well. In the daytime the bees would scatter all over the hive. At night, the first out would pile up on the zinc, and prevent the others from coming through.

ADRIAN GETAZ.

Knoxville, Tenn., Jan. 24, 1891.

Illinois State Convention.

If Springfield is a better place than Chicago to hold the Convention, then I am for Springfield. The only question is, what place will suit the greater number.

Mr. Dadant's idea, to stir up all the local societies in the State, is good.

Let me suggest what may be a good plan, if there is time to carry it out. Call on each bee-keeper in the State who is interested in the matter, to send at once to the AMERICAN BEE JOURNAL a postal card, saying, in the fewest words possible, at which place he will attend a State Convention, if one is held there. The card should read something like this:

"I will attend a State Convention at Chicago.—John Smith."

"I will attend a State Convention at Springfield.—Peter Roe."

"I prefer a convention at Springfield, but will attend either there or at Chicago. —James Smith."

"I prefer a convention at Chicago, but will attend either there or at Springfield. —Mary Smith."

Then, when the answers are in, it will take very little room to summarize in the AMERICAN BEE JOURNAL, giving the name in full, something like this:

"The following will attend a State Convention, if held at Chicago:—John Smith, T. Opbar, W. I. Deframe, etc."

"The following will attend a State Convention, if held either at Chicago or Springfield, but prefer Springfield:—James Smith, Mrs. L. Harrison, T. S. Uper, etc."

Then the place could be chosen according to the majority. Another very important result: If a goodly list of prominent bee-keepers are known in advance to be expected at a certain place, it would have no little influence in bringing some who otherwise would not come.

I said this would be a good plan, if there were time for it. On further thought, it seems to me this could do no harm in any case. If each one will sit down and write a postal, before finishing the reading of this JOURNAL, you could give us the result, at the farthest, two weeks after calling for responses, could you not?

While Chicago would be decidedly more convenient for me, I think it quite possible that there may be good reasons for preferring Springfield.

Other places might be desired, but I suspect the forces will be massed on the two named.

I believe we can have a rousing good convention.

C. C. MILLER.

Marengo, Ills., Jan. 27, 1891.

Decatur is Suggested.

I suggest that a convention be called to meet in Decatur about April 10. The State encampment of the G. A. R. meets that week, so that reduced rates could be had, and we will agree to find a suitable place for the meeting.

J. S. HUGHES.

Mt. Zion, Ills., Feb. 2, 1891.

Favors Springfield.

MR. EDITOR:—You ask what I have to say in regard to organizing a State Bee-Keepers' Convention at Springfield. I am strongly in favor of it, and enough has already been said, as regards both the need of such an organization and its location. Mrs. Harrison, on page 150 of the AMERICAN BEE JOURNAL for Jan. 29, 1891, and A. N. Draper, on page 151, of the same issue, both give sufficient reasons as to why and where; but who shall say *when?*

The Capital Bee-Keepers' Association is located at Springfield. P. J. England, President, and myself Secretary, constitute the executive committee, and it seems that the duty of action naturally devolves on us. That action should be prompt—while the State Legislature is in session. We accordingly met, and decided in accordance with your suggestion, to meet at an early date, and invite the bee-keepers throughout the State to come and organize an Illinois State Bee-Keepers' Society. Therefore, the Capital Bee-Keepers' Association will meet in the Supervisors' Room of the Court House, at Springfield, Ills., on Thursday, Feb. 26, at 10 a.m. Why cannot each county in the State be represented?

C. E. YOCOM.

Sherman, Ills., Jan. 30, 1891.

◆

Crop of 44 Pounds Per Colony.

In my locality the locust and poplar failed to secrete honey last Summer. White and red clover gave a fine surplus of white honey. I had 2,200 pounds of surplus from 50 colonies, or an average of 44 pounds per colony. My colonies gave 40 pounds of comb and 50 pounds of extracted-honey per colony, which wholesales at 16 and 20 cents per pound. They gathered enough honey from asters to winter on.

H. P. FAWCETT.

Dilworthtown, Pa., Jan. 19, 1891.

◆

Rather Discouraging.

My experience in 1890 is not very encouraging. I had 60 colonies in the Spring, which number was decreased (by robbing) to 57 colonies in the Fall. After feeding 20 pounds of sugar, there was a decrease of 5 pounds in the comb-honey, and no extracted-honey. I gave them about one month's work, and every time I touched them did harm. Had they not done well on the white clover, they would have starved in July and August. The Winter being mild and dry, I have left them out of the cellar until the present time, and I think they may be left out until Spring, although they are weak, and not well supplied with food. I put on sections, and the bees did not fill them, which accounts for the loss in weight of honey. The mercury has not been as low as zero yet, and the bees have been out every few days, ten days being the longest they have been confined at any one time. I find sulphur good for mice as well as moths. This Winter and Spring will materially reduce the number of colonies in this locality, especially if the Spring should be unfavorable. There seems to be great difficulty in rearing queens in this vicinity, as a number of them have been lost before getting to work.

DAVID M. IMLAY.

Seward, Nebr., Jan. 24, 1891.

Bees Uniting in the Cellar.

Some may not know that bees will, of themselves, unite in the cellar. They usually do this in the Spring, when the temperature gets so high as to cause them to run over the hives. I know from experience, that they will move upward on the hives, cluster on the outside, and when cold or hungry will go into the nearest hive. Therefore, if we place those that are light on top, they will, in all probability, come out strong in the Spring. I have usually kept a few colonies of Italians, and when put away in the cellar with my blacks, I find them through nearly all the hives in Spring. Those who unite their queenless colonies with light ones in the Spring, can take advantage of the above fact, by putting them back in the cellar for a few days, then unite and leave them 3 or 4 days more. The only trouble I have while uniting in the cellar is, that the bees crawl inside of my clothing.

JOHN HANDEL.

Savanna, Ills., Jan. 30, 1891.

◆

Experience of a Novice.

Your correspondent is a novice in bee-culture, shall I call it, and last October purchased 6 colonies, one of which died before Winter set in. The others are well supplied with honey, and I think will go through the Winter all right. I put three colonies in the cellar, but I am afraid mice have gotten into one of them, as they are very restless all the time. Mr. Grimes is an old bee-man, and has about 30 colonies. He moved into this neighborhood last year, and is a near neighbor of Mr. Johnson, another of our new subscribers to the BEE JOURNAL, who has kept bees for 30 years, but the last 20 all the honey he could get would be by killing the bees, and then get an inferior quality. Well, his new neighbor, Grimes, managed his bees for him last year, and he got 90 pounds of extra-nice honey from his 2 colonies. We have another enthusiast in bees, H. B. Ritter, who is making big preparations for next season. We are thinking of organizing a local bee-club, and getting our farmers more interested in this profitable business. I want to find out how to transfer my bees from old-fashioned hives to good ones, and if your book, "Bees and Honey," does not tell, will you please inform me in your JOURNAL.

SCOTT D. JUNKIN.

North Webster, Ind.

[You will find instructions for transferring bees in all the bee-books.—ED.]

Wavelets of News.

Horticulturists and Bee-Keepers.

Organization seems to be the order of the day, and if horticulturists and bee-keepers only knew the advantages to be derived from the result of proper organization, they would not be so slow in bringing about such a result.

The benefits to be derived are many; you learn improved methods, you can produce larger crops, and sell in larger quantities, thereby reaching better markets; you can get better prices, with a more sure demand for your products; besides, you can devote more of your time to the production of any special crop.

The petty jealousy existing amongst some, must be done away with; it is wrong to suppose that because you have been the first to commence in any line of business, that no one else has a right in that same line, yet there are some so narrow minded as to think so. This selfishness must cease before we can hope to succeed in a proper and thorough organization.—*Inter-Mountain Horticulturist.*

◆

Philosopher Joe and His Bees.

I asked him the other evening a simple question: "Uncle Joe," said I, "have you any honey to sell?"

"Certainly," he repiied. "Oh, I reckon I get more honey from my bees, because I keep on better terms with them. I whisper to the queen and tell her what I want. That settles it. Young man, if you want honey, be on good terms with the queen of the hive; if you want a wife, pay a little attention to the queen of the home; if it's butter you are after, see to the queen of the herd, and, in short, court the queen if you expect success."

"I am a little puzzled," said I.

"Don't understand. Your bees didn't do well?"

"Well, no, not very. Fact is, only one colony lived through, and they are played out. I have no bees now."

"I'm sorry. You ought to have courted the queen."

"Tell me how. Perhaps I'll start in again, if I can learn your secret."

"I don't quite like to tell. I can't, if I wanted to, and I don't know as I would, if I could; but I will tell you a thing or two, and you may guess it out.

"I went to a hive last Fall to get some honey. I never take honey as a robber, so I asked the queen: 'Your royal highness,' said I, 'I have come to ask if you and your people will grant me friendly tribute from your stores for my family and friends?' I won't tell you all I said, but what she replied was:

'Honey, honey, honey-dew,
Not an ounce have I for you.
If you doubt it, man alive,
Kindly stoop and lift the hive.'

"I lifted it, and sure enough, I was sure she was right. Do you think I robbed her? Not a bit. I whispered again, and she sent a messenger to say:

'Honey, honey, honey-dew,
Tribute comes this year from you.
Feed us with a little care,
Next year we will give our share.'"

"That isn't very profitable, is it?"

"Not so very. It isn't very profitable to have a sick cow, or have a horse get hurt; but we don't kill them because they are sick, or work the horse when it is lame. Listen to the queen—consult her needs. You'll find it pays, in the long run. Be a gentleman with bees. Treat them kindly, courteously, carefully, intelligently. Study them, and be with them, as much as you can. You can learn a lot from bees—more than from books."

"Well, how did it come out?" I asked.

"All right. I paid my taxes to that queen last Winter, and this year I whispered again, and the messenger came and said:

'Honey, honey, honey-dew
Five good pounds have we for you.
Thanks for all your kindly care,
Next year we'll have more to spare.'

"But five pounds isn't much."

"Right, but did you hear the promise:

'Next year we'll have more to spare.'

"That isn't all. They sent me out another colony this year, that is doing well. The queen whispers to me that they will only need a little nectar to help them through, and that, if all moves well, next year they will give me back all with interest. Oh, I am in love with my bees!"—*Western Rural.*

◆

Crammed Full.

The AMERICAN BEE JOURNAL is reduced in size, but has double the number of pages, and is more convenient for binding. As usual, every number is crammed full of interesting articles, from all the leading bee-keepers of America.—*Western Plowman.*

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☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

Our Sewing Machine.—One who has purchased a Sewing Machine of us, as advertised on page 382, volunteers this statement:

> I am well pleased with the Sewing Machine you sent me; any person wanting a good Sewing Machine, one that is equal to the high-priced machines which are sold by agents, can do no better than to send for your $15.00 Machine. They will be agreeably surprised when they see it. Mine is really better than I expected.
>
> W. J. PATTERSON.
> Sullivan, Ills., Dec. 5, 1890.

Clover Seed.—White Clover Seed has declined, and Alsike has advanced. The price of either seed will be 25 cents per pound; $2.50 per peck; and $9.00 per bushel, until further notice.

The "Farm-Poultry" is a 20-page monthly, published in Boston, at 50 cents per year. It is issued with a colored cover and is finely illustrated throughout.

We have arranged to club the AMERICAN BEE JOURNAL with the *Farm-Poultry* at $1.35 per year for the two. Or with the ILLUSTRATED HOME JOURNAL at $1.75.

A Word of commendation from our readers to those not among our subscribers, will be more potent than anything we can say. If you like our JOURNAL—please let your neighbor know it, and let us thank you in advance for this favor.

Binders made especially for the BEE JOURNAL for 1891 are now ready for delivery, at 50 cents each, including postage. Be sure to use a Binder to keep your numbers of 1890 for reference. Binders for 1890 only cost 60 cents, and it will pay you to use them, if you do not get the volumes otherwise bound.

Subscribers whose time does not expire for some months can safely renew at any time, without fear of loss, because we always extend the time from the date of expiration on our books. If you want any other magazine or newspaper, we can furnish it, and save you money by clubbing it with the BEE JOURNAL. See our list of a few of them on page 234.

HONEY AND BEESWAX MARKET.

DETROIT, Jan. 27.—Comb Honey is quoted at 15@17c. White Clover quite scarce. Extracted, 7@8c. Beeswax, 26@27c.
M. H. HUNT, Bell Branch, Mich.

NEW YORK, Jan. 29.—Market is very quiet, especially on comb honey. We quote: Fancy white 1-lbs., 15@16c; 2-lbs., 13@14c; off-grades, 1-lbs., 13@14c; 2-lbs., 12c; buckwheat, 1-lbs., 11@12c; 2-lbs., 10c. Extracted, basswood and white clover, 8@8½c; buckwheat, 6½@7c; California, 6¾@7¼c; Southern, 65@70c per gallon. Beeswax, 25@27c.
HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

KANSAS CITY, Jan. 27.—Honey is very slow sale, both comb and extracted. We quote: White 1-lb. comb, 16@18c; dark, 12@13c; white, 2-lb., 14@15c; dark, 11@12c; extracted, 6@7c. Beeswax, 25c.
CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CINCINNATI, Jan. 28.—Demand is good for all kinds of extracted honey, with a full supply on the market of all but Southern, which is scarce. It brings 6@8c per pound. Demand is fair for choice comb honey, which we hold at 18@20c, in the jobbing way.

Beeswax is in good demand at 24@26c., for good to choice yellow. C. F. MUTH & SON,
Corner Freeman & Central Aves.

CHICAGO, Jan. 29.—Demand at present not very active on comb honey. Fancy white, 18c; white, 17c; white 2-lb. sections, 15c; buckwheat, 1-lb. sections, 13c; extracted, 7@9c. Beeswax, 28c.
S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, Jan. 28.—Fancy white 1-lb. comb, 18c; fair to good, 17c; dark 1-lb., 14@15c; 2-lb. white comb, 15@16c; 2-lb. dark, 13@14c; extracted, white, 7c; dark, 5@6c.
HAMBLIN & BEARSS, 514 Walnut St.

CHICAGO, Jan. 31.—There is not the volume of trade usual at this season, yet prices are without material change since last quotations. Best lots of white honey in 1-pound sections, brings 17@18c; brown and dark, slow, at uncertain prices. Extracted, 7@8c per pound. Our stock is light, as to quantity, but is kept well up to demand by daily receipts. Beeswax, 27@28c.
R. A. BURNETT, 161 S. Water St.

BOSTON, Jan. 29.—While honey is selling slowly, prices are being well maintained, and the supply will be entirely exhausted before the first day of March. Best 1-lb. comb-honey is selling at 19@20c; fair to good, 18@19c. There are no 2-lb. sections on hand. Extracted, 7½@9c. There is no beeswax on hand.
BLAKE & RIPLEY, 57 Chatham Street.

ALBANY, N.Y., Jan. 27, 1890.—The honey market is quiet and steady, with light stocks of any kind or grade. We are selling white at 15@18c; mixed, 14@15c; dark, 12@14c. Extracted, white, 9@10c; mixed, 6@8c; dark, 6@7c.
H. R. WRIGHT, 326-328 Broadway.

* * *

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We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

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Bee-Keepers' Guide	1 50	1 40
Bee-Keepers' Review	2 00	1 75
The Apiculturist	1 75	1 65
Canadian Bee Journal	1 75	1 65
American Bee-Keeper	1 50	1 40
The 7 above-named papers	6 00	5 00
and Langstroth Revised (Dadant)	3 00	2 75
Cook's Manual (1887 edition)	2 25	2 00
Quinby's New Bee-Keeping	2 50	2 25
Doolittle on Queen-Rearing	2 00	1 75
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 60	1 50
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	2 20
Western World Guide	1 50	1 30
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Do not send to us for sample copies of any other papers. Send for such to the publishers of the papers you want.

* * *

We send both the Home Journal and Bee Journal for 1891, for $1.35.

* * *

☞ The Union or Family Scale has been received, and I am much pleased with it. W. H. KIMBALL.
Davenport, Iowa.

* * *

Supply Dealers, before issuing their Catalogues for next season, should write to us for terms on the Globe Bee-Veil. We have sold over 1,200 within the past year. They give universal satisfaction.

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SECTIONS, $3 per 1,000. Foundation, 45 cts. per pound. Chaff-Hives, $1.25 each. Simplicity Hives, 90c each. Dovetailed Hives, 80c each, and everything needed in the Apiary cheap. Send for illustrated Price-list for 1891, free. "How I Produce Comb-Honey," by mail, 5c. Third edition just out.

Address, GEO. E. HILTON,
5A13t Fremont, Mich.

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Send 50 Cents for my Book, entitled—"A Year among the Bees;"—114 pages, cloth bound. Address,

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ASTONISHING!

YES, astonishing that only one State has yet responded to my advertisement, and that State is not Michigan. If you wish to try my Potatoes for those 17 three-frame Nuclei, and the full colony of my 5-banded Italians, and for their good qualities, order at once and run your chances on the Tested Queens Free. This will not cost you anything; or, if preferred, the first response can have his money returned. Order at once. Don't wait. Catalogue now ready.

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PEARS

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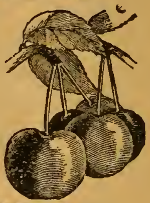

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Send for our Illustrated Price List.

10A1y

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THE AMERICAN BEE JOURNAL
CIRCULATES
ALL OVER THE WORLD.
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVII. Feb. 19, 1891. No. 8.

Editorial Buzzings.

Your Voiceless Lips, oh, flowers, are living preachers,
Each cup a pulpit, and each leaf a book,
Supplying to my fancy numerous teachers
From the loneliest nook.

Dr. C. E. Rullison, an apiarist of Flushing, Mich., died on Dec. 22, 1890.

☞ Mr. G. H. Knickerbocker's wife "is now on the road to a full recovery." This we are glad to learn from Mr. K. himself. Her illness has prevented him from furnishing the report of the New York State Convention. We expect to give some more of it next week.

Helping, by sharing the responsibility, is the view which Milo George, Bowling Green, O., takes of being a member of the National Bee-Keepers' Union. He says:

> Suppose it may never benefit one-half of the members individually, I feel that every bee-keeper in America should belong to it, so as to help some others out of trouble. I think that it is their duty to join the Union!

Easter Joy is an excellent Easter-day exercise for Sunday schools, just issued by the enterprising music publishers, S. W. Straub & Co., 243 State Street, Chicago. It contains beautiful songs, well selected scripture readings, choice recitations, etc. Price only 5 cents.

There are Wants and wants and wants—and there are so many of them, that we have concluded to create a Department in the AMERICAN BEE JOURNAL for making them known in an inexpensive but efficient way. Many have desired such a Department heretofore, and now that we have more room than formerly, we can accommodate them. Ten cents a line will now let your small wants be known—if you *want* to do so.

Sickness and Death in the family of friend Chas. F. Muth, of Cincinnati, O., prevented his attending the Ohio State Convention at Toledo, last week, or preparing his essay in time for that meeting. The essay may be found on page 260. Three of his grand-children were attacked with diphtheria, and two of them died on one day; the other is apparently recovering. The BEE JOURNAL extends its sympathy to the bereaved family.

Stolen America, a Story of Bermuda, by Isobel H. Floyd, is the title of an interesting novel, just received from the authoress, 56 Clark St., Jersey City Heights, N. J.

She is an alarmist, who thinks that the time may come when Great Britain may be desirous of interfering with the United States. Then she imagines that with Canada at the Northern boundary, and Bermuda as her naval stronghold, so near to the Eastern coast, she may become extremely dangerous. Her patriotic appeal is in the form of a love story, and will be read with interest, even without endorsing her alarm and fear.

Granulated Comb-Honey.—Mr. C. W. Conner, of Ashton, Iowa, asks to have these questions answered in the Bee Journal :

I want to know how to keep honey, in sections, from granulation? Can it be melted again after it has once granulated?

To prevent comb-honey from granulating, it should be kept in a warm room, with a free circulation of air. In such a place, granulation may be kept off as long as possible. A cool, damp place will ruin any honey in the comb in a short time. When once granulated, we know of no way to liquefy it except to melt the honey and comb, the wax will then cake at the top, and can be removed. Even then, the honey will granulate again, if allowed to stand exposed to the air.

◆

☞ The Newaygo County, Mich., Farmers' and Bee-Keepers' Institute will be held at Fremont, Mich., on Feb. 26 and 27. George E. Hilton, of Fremont, is the Secretary, and programmes can be obtained of him.

◆

Dead-Air Space.—J. A. Nut, of Belle Vernon, Pa., asks: "Is one inch of dead-air space as good as three inches?" As all that is necessary is to have the two walls separated, a small space is as efficient as a large one. If the space is to be filled with chaff, leaves, etc., then use 3 inches, or even more.

◆

Catalogues and Price-Lists for 1891 have been received from

A. A. Weaver, Warrensburg, Mo.—16 pages—Bee-Keepers' Supplies.

Burdsal Apiary and Supply Factory, Lebanon, O.—12 pages—Supplies for the Apiary.

Luther & Horton, Redlands, Calif.—4 pages—Italian Queens.

Page, Keith & Schmidt Co., New London, Wis.—16 pages—Bee-Hives and Supplies.

Jenkins & Parker, Wetumpka, Ala.—60 pages—Bees and Bee-Keepers' Supplies.

Illinois State Convention.

It is important that the State Association be formed at once, in order to be prepared for the Columbian Fair. We invite special attention to the following notice:

The Capital Bee-Keepers' Association is located at Springfield. P. J. England, President, and myself Secretary, constitute the executive committee, and it seems that the duty of action naturally devolves on us. That action should be prompt—while the State Legislature is in session. We accordingly met, and decided in accordance with your suggestion, to meet at an early date, and invite the bee-keepers throughout the State to come and organize an Illinois State Bee-Keepers' Society. Therefore, the Capital Bee-Keepers' Association will meet in the Supervisors' Room of the Court House, at Springfield, Ills., on Thursday, Feb. 26, at 10 a.m. Why cannot each county in the State be represented?

C. E. Yocom.

Sherman, Ills., Jan. 30, 1891.

◆

Dr. Miller sends us this characteristic reply to a question on page 130, which we most fully endorse:

Mr. A. J. Duncan asks for something fresh in the line of Italianizing; evidently wanting something later than books or back numbers of the Bee Journal, to which he asks not to be referred. For my part I do not know anything later or better; but hope, if his search is successful, he will give us the benefit of it in the Bee Journal. C. C. Miller.

◆

London, Ohio, has an attack of the "nuisance" fever. The Council has an ordinance before it intending to drive bee-keeping out of the limits. Mrs. M. P. Raybun has an apiary there. The Union has deluged the Council and officers with the decision of the Supreme Court of Arkansas—declaring that bee-keeping is not a nuisance, and awaits the result.

◆

☞ The Huron, Tuscola and Sanilac Co. (Mich.) bee-keepers will meet in Caro, March 11 and 12, 1891. The editor of the *Review* expects to be present and read a paper on the "Different Varieties of Bees."—*Review.*

An Explanation.—On page 109, we remarked that the *American Bee-Keeper* had offered a special "discount on the first order for goods" from their advertisers, when mentioning that periodical—that some of the advertisers were "greatly annoyed" about it, and would repudiate the arrangement. In this, we had special reference to the G. B. Lewis Co., who wrote us the following:

> Well, you see, Falconer has "gone and done it." They are bound to "guarantee us" whether we would or not. We gave them strict orders not to publish our "ad" in any such form, notwithstanding which, you see, they have done it. What do you think of such ways of doing business as this? Has a journal any legal right to publish an advertisement in the manner that he has done, advising our customers that they will receive a discount from us upon their first orders, contrary to our express instructions? Now, we see nothing to hinder nine-tenths of our smaller customers from claiming this discount, whether they were impelled to write us for prices from their intelligence of our whereabouts, learned from the "American Bee Journal," "Gleanings," or any of the many agricultural journals in which we advertise. G. B. LEWIS CO.

The letter referred to was dated Dec. 29, 1890, and reads thus:

> We beg to say that we cannot consent to advertising as you suggest. The scheme looks to us more like boys' play than business. And business transactions of any kind should have some tangible foundation upon which figures can be made. And we think your plan would be unsatisfactory to you, as well as to us. Hence, we decline to offer any discounts for parties patronizing any particular advertising medium. G. B. LEWIS CO.

The trouble seems to be that this letter was not received until the *Bee-Keeper* for January was printed, and was, therefore, too late to stop the insertion of their advertisement. Concerning these two letters, the Falconer Manufacturing Co., remark thus:

> You will note that they do not give us "strict orders not to publish," etc., and consequently their "adv." was not published contrary to their "express instructions."

Allowance must be made for the fact that these two firms are rivals in business, and the following letter will show the present state of feeling, at least on one side:

> We herewith hand you a copy of letter written to the W. T. Falconer Manufacturing Co., which you have our consent to publish, as well as the letter written you, dated Jan. 7. We would say, also, that we are not through with this matter yet. We are not suited to have any paper present us to the public in the light that they have, nor are we pleased to have them offer discounts for us. We think we are fully competent to conduct our own business.
> G. B. LEWIS CO.

This explanation is made necessary by the fact that the Falconer Manufacturing Co. claims that the matter, as published, did them an injustice, and that they had not inserted the advertisement without authority for doing so. We regret the misunderstanding, but there was nothing left for us to do but to give the proof, and here it is.

We thought the offering of such a special discount was unwise, and said so, plainly but kindly. The publishers of the *Bee-Keeper* thought so, too, for they omitted it from their February issue (as they have since informed us) before seeing our criticism; their objection to it being that it would cause "a large amount of extra work, in keeping track of the discounts, in the busy season." This was one of the objections we had thought of, and was included in our "etc."

As this "discount" matter has been *discontinued*, there is no cause for ill-feeling, and we hope that harmonious relations will be restored all around. That we had none but the best of intentions, in mentioning this matter, is fully shown by the kind way of presenting it, on pages 109 and 186.

Concerning the copying so much of our name, they write thus:

> As to our magazine being of similar name, we regret as much as yourselves that such is the case, but we assure you that the similarity never occurred to us until after the cover engraving was made, and the name announced. As our magazine will be spoken of as the "Bee-Keeper" however, we do not anticipate any confusion.

As the matter cannot now be avoided, we must all try to be as distinctive as possible, and thus prevent confusion.

Last Thursday two new bee-papers came to our desk. The California *Bee-Keeper* is a monthly, edited and published by Wm. Styan, at San Francisco, at $1 a year. Mr. Styan was a correspondent of the "Western Apiarian," long since deceased. It is nicely printed, well edited, and gives evidence of long life. We wish it success. There are 9,000 bee-keepers in California, and they ought to support a good bee-periodical. It contains 16 pages and a cover.

The other new-born bee-paper is called the White-Mountain *Apiarist*. It contains 12 pages, and is edited and published monthly by A. D. Ellingwood, at Berlin Falls, N. H., at 50 cents a year. Bro. Ellingwood's "better half" has one-half of the *Apiarist* for a department called "The Circle at Home," which she fills with good, wholesome, honey-sweet home reading matter. Such is a strong "partnership" when they "pull together; and we wish them abundant success.

☞ Dr. C. C. Miller is still laid up by *La Grippe*—we are "almost there," too.

Queries and Replies.

Sowing Alsike Clover.

QUERY 753.—Will it do to sow Alsike clover, red clover, and cow peas together? If so, I want to sow some.—Mississippi.

I do not know.—J. M. HAMBAUGH.

Yes; sow early.—MRS. L. HARRISON.

I have had no experience in this line. —H. D. CUTTING.

I have no experience as an agriculturist, and do not know.—J. E. POND.

I know nothing about the cow peas; the others will grow well together.—G. M. DOOLITTLE.

I do not know. I should think much would depend on the soil and climate.—JAMES HEDDON.

I presume it will do; but I am not prepared to say whether it is the best way.—M. MAHIN.

I am not well enough informed regarding the grasses of Mississippi to advise in this matter.—EUGENE SECOR.

In this section of country the alsike clover does best with timothy. It does not do well with the red clover.—G. L. TINKER.

In your climate the clover should be sown in the Fall—October or November. This would be too late for cow peas.—J. P. H. BROWN.

I am not acquainted with the habits of cow peas. If like the common pea, they would smother the young clover.—R. L. TAYLOR.

It will do, though it may not be wise. We sowed alsike, red, white and alfalfa. They did well. There are some excellent effects of sowing such mixed seeds. —A. J. COOK.

I do not know about the "cow peas." If they grow very rank and dense, they would probably choke out the clover. Why not sow the clover with a rather thin sowing of oats?—C. H. DIBBERN.

I have sowed red and alsike clover together, and have seen it do well. The trouble about alsike clover in my locality is, its shortness of life. I have never seen but one good strong crop from a single sowing. Red clover produces two or three good crops from one time seeding. Alsike has proved itself a biennial plant in this climate and soil. Alsike clover is a wonderful honey producer. I speak for middle and northern Kentucky. I have no experience with the cow pea.—G. W. DEMAREE.

Alsike clover seed is very fine, and when sown with red clover, should be in the proportion of one-third of alsike to two-thirds of red clover, and they do fairly well together, though the red clover has a tendency to crowd the alsike out. In Mississippi, cow peas are not sown at the same time as the clovers, and would, therefore, not be sown "together." In the North, it is sown with timothy to the best advantage for pasturage. Alsike honey is of excellent body and flavor.—THE EDITOR.

To Jersey County, Ills., Bee-Keepers.

I am trying to get the bee-keepers of Jersey Co., Ills., together so as to organize a society. How should I go to work to make it a success? There are lots of bee-men around here, if I can only get them together. They each have from 1 up to 100 colonies of bees. Suggestions will be appreciated from any one. P. E. VANDENBURG.

Jerseyville, Ills., Feb. 4, 1891.

[We should say, Write a notice calling a Convention at some convenient place in the county. Have it published in all the bee-periodicals (they all publish such *free*), and in that way you will get enough together to talk the matter over, and organize. Then you can get the names and addresses of all the bee-keepers afterwards, and induce them to attend a future meeting, and become members. This is the best advice we can offer now.—ED.]

Bee-Conventions will be held during the next few months in many localities. The most convenient thing at such gatherings is the Convention Hand-Book. It contains a simple Manual of Parliamentary Law and Rules of Order for Local Bee-Conventions; Constitution and By-Laws for a Local Society; Programme for a Convention, with Subjects for Discussion. In addition to this, there are about 50 blank pages, to make notes upon, or to write out questions, as they may come to mind. They are nicely bound in cloth, and are of the right size for the pocket. We will present a copy for one new subscription to the BEE JOURNAL (with $1.00 to pay for the same), or 2 subscribers to the HOME JOURNAL may be sent instead of one for the BEE JOURNAL.

Wavelets of News.

We Acknowledge the receipt of copies of Bulletin Nos. 13 and 14 of the Agricultural Experiment Station of the University of Minnesota. The first is a treatise on "Flax Culture," and the latter on "Swine for Profit." This institution is under the management of Prof. N. W. McLain, the Director, who was fomerly located at Aurora, Ills., and a frequent visitor at this office, as well as a valued correspondent of the Bee Journal. The Experiment Station, under his supervision, we are proud to say, has been a grand success.

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All Men have their frailties, and whoever looks for a friend without imperfections, will never find what he seeks. We love ourselves, notwithstanding our faults, and we ought to love our friends in like manner.—*Indiana Farmer.*

◆

Economy in Bee-Keeping.

A rigid economy is demanded in bee-keeping, as in most other occupations. Nothing must be allowed to go to waste; indeed, we may go so far as to say the profits are limited by the savings. All fragments must be utilized; pieces of wax, comb, lumber, refuse honey, etc., must be taken care of and used. Scraps of time are also important items, and should be devoted to this work of utilizing and saving. A little common-sense and good judgment goes a good ways in managing bees. The times of the present day demand close economy. Margins are small, and profits deviating; so that judicious and careful expenditure is a prime requisite to success in this as in other callings.—W. M. B., in the *Indiana Farmer.*

◆

Dovetailed Hives.

On starting in the business, commence with simple hives with movable frames (not box hives, or "gums" without frames), and have them all alike. I have used several kinds, but my favorite is the 8-frame dovetailed hive. This is the strongest, simplest and cheapest. A 2-story hive, complete, can be bought, in the flat, for about $1.60 each, and any one can put them together. Each hive will hold 100 pounds of surplus honey, besides what is needed for the bees.

Always use comb foundation; it is a great saving to the bees, and insures perfectly straight combs. Many persons claim it to be too expensive. Let us see: It is estimated that it takes 12 pounds of honey to make one of comb; honey is worth at least 10 cents per pound in liquid form, which makes each pound of comb cost $1.20, besides the work of the bees in making. A pound of surplus foundation costs about 60 cents, or one-half saved.—*O. J. Farmer.*

◆

Destruction of the Forests.

Bee-keepers should enter their protests against the destruction of forests, especially in the originally heavily wooded districts of the older States, for the reason that it means the destruction of that great honey-bearing tree, the linden or basswood. In many localities, that tree is the chief source of the best honey, and bee-keepers view with justifiable alarm, its probable early annihilation.—*Ex.*

◆

Bees Disturb a Picnic.

The weather is never too warm for the busy bee to make its presence felt, and July 30 was no exception to the rule. Six young ladies, among whom were Tesa Jones, Mamie Watson and Julia Cornell, of this city, went out to Moler's grove in the afternoon to recline in the shade and enjoy themselves as they saw fit. After partaking of a good dinner they cast about for a good place to sit down and have a social chat. Right under the spot where they were sitting the festive bumble-bees, who are supposed to improve each shining hour, had built a nest and reared a numerous progeny. Without any previous understanding about the matter, those girls concluded to get up, and they did not stand on ceremony, but shot up in the air like rockets, and commenced to dance in a manner that would put to flight a Sepoy Indian. They ran in every direction, fell over logs, crawled into brush heaps, and one of the girls got into a hollow log. The bees were very busy all this time, a fact that no one realized more than those girls did, and a sorrier lot of picnickers could not have been found within a radius of 15 miles. They finally got away from the bees, and lit out for town like check lightning. The clock shelf is rich enough for them to take their meals off of at present, while they hum, "How doth the busy bee improve each shining hour?"—*Exchange.*

Topics of Interest.

Do Some Thinking for Yourself.

G. M. DOOLITTLE.

"How can I best manage my bees so as to secure the most honey, in a locality where the bees are prone to swarm right in the height of the honey harvest, the harvest being from white clover, and lasting from 6 to 9 weeks?" is something a correspondent wishes to know.

In reply, I would say that there can be no set rule given to work by, with bees in any locality, inasmuch as seasons vary from year to year. Again, what would apply to me during seasons very nearly alike, would not apply to another in a different locality, for his seasons could not possibly be like mine. Then, again, the condition of the bees during different seasons has very much to do with how they should be managed.

As a rule, I prefer to hive all swarms on the old stand, removing the old colony to a new stand, thereby throwing all of the working force into the new hive on the old stand, removing the surplus department from the old hive to the new.

This, in most years, works well, and is very near the plan advised by Messrs. Heddon, Hutchinson, and many others. All the difference there is, lies in the fact that the two gentlemen above named leave the old hive near the new one for about six days, when the old hive is carried to a new stand, thus throwing all of the flying bees from the old hive in with the new swarm, at the time the old hive is removed. This gives added strength to the new swarm, but all of this added strength is in the shape of bees old enough to go to the fields, so that none of them are what would really be termed young bees.

Instead of getting this added force of field bees, I do it on the start by shaking all of the bees from about one-half of the combs remaining in the old hive after the swarm has issued, thus giving the new swarm bees of all ages, down to those which have just hatched from the cells, so weak and downy that they can hardly crawl into the hive.

To those that fully understand the laws governing bees, it will become apparent, that on the morning of the sixteenth day, there will still be bees with the swarm that have never yet gone to the field to labor, so that the bees originally hived in the new hive will hold out much longer than they would by adopting the other plan of moving the old hive on the six or seventh day.

Either one of the plans are more favorable toward a good yield of nice comb-honey, than is the old plan of hiving the swarm on a separate stand and leaving the partly-filled boxes on the old hive. But there are times and seasons, when from cold and unpropitious weather, coming from 4 to 6 weeks previous to the honey harvest, few if any bees will be hatching at the time of swarming, for it frequently happens that cold and wet weather during fruit-bloom keeps the bees at home, so that no new honey is gathered, and after this bloom there is no honey to be had, for there are no flowers to bloom soon after the fruit blossoms are gone; hence, the queen is not fed by the workers sufficiently to keep her laying as she should, and for this reason there will be but very little brood in the hives just when there should be the most. This can be obviated to a large extent by feeding, but if the weather is *very unpropitious*, I find that the bees cannot be coaxed to rear brood of any account, do what we will.

Well, supposing that we have not succeeded in getting the brood that we need during the time there should be the most, and that the swarming and honey season arrives just when there are very few if any young bees hatching, what are we to do then?

Any one having just a little sense would know that the plans as given above would not be of the most value at such times, for were they used, neither the old nor new swarm could do anything to advantage. The thing to be done under such circumstances, is to either keep the bees together in their old hives, or else hive two or more swarms together in a new hive on a separate stand (from which we should obtain our surplus honey), allowing the old hives to remain on their old stands, in order to retain sufficient bees with the young brood to hold it until the second lot, as it were, hatched out.

If the colonies can be kept from swarming (or the brood raised above the sections while the swarm is out, giving the swarm a new hive under the sections with a queen-excluder between the two, as I advised some two or three years ago), then the bees can be kept all together, and considerable of a crop of honey obtained, even under the most unfavorable circumstances. If you do not chose to do this, then hive two or more swarms together, and you will not be far out of the way. Not as much honey will be obtained by this latter plan, but to offset this you will have several new colonies, while in the other case you do not increase any.

Now do not think that you must follow any of the plans I or any one else give to the letter; if you undertake it, you will not be likely to receive the benefit that you would by doing some thinking of your own.

No writer can give, in one article, all the different plans he uses to accomplish even one of the smallest parts of apiculture, and if he or she have a fixed determination to succeed, very likely they may not use the same plan, as far as all the minutia is concerned, twice in their whole lifetime. The thing of it is, that there are such varying circumstances all the while, that no rule like the rules of arithmetic, can be used in bee-keeping.

If you would succeed, step out on your own resources, and do not be tied to any one's "apron strings." If you cannot make one thing work try another, using your best judgment all the while. If you cannot make the bees work for comb-honey, try them for extracted; and if this does not work, make them build combs which you can convert into wax and cash. Remember, that you are to be the one; not Doolittle, Dr. Miller, A. I. Root, or any one else.

Borodino, N. Y.

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Facts About Large or Small Hives.

J. A. TODD.

I have not seen an article on the question of large or small hives, that offers me any satisfactory evidence on either side, if I want anything stronger than mere assertion or opinion, unless it is W. C. Wolcott's article on page 193.

I have experimented with different sized hives, and while my experience is not conclusive evidence, it justifies me in making the most of my hives large for the coming season.

Last Spring I moved my bees twice by railroad, and on May 24, I finally located my 25 colonies. I had five 8-frame Simplicity hives, which gave 88 pounds each; ten home-made 10-frame chaff hives, which gave 106 pounds each; and ten home-made 12-frame chaff hives, which gave 129 pounds each. The colonies were of equal strength in the Spring, but when put away for Winter they were, in size of colony, about in proportion to the size of the hive.

With one exception, they all had to build all their comb, over and above the original eight frames each had to start with. I used no foundation, and but few starters, and had plenty of drone-comb to rear consumers.

The largest yield was from a 12-frame hive—285 pounds. The least yield was from an 8-frame hive—35 pounds. It was all extracted-honey.

Two 12-frame hives gave swarms early. One 10-frame and one 8-frame swarmed later, but not too late.

I was troubled very greatly with brood in the upper story of the 8-frame hives, not quite so much in the 10-frame hives, and almost none in the 12-frame hives. My bees are all Italians. My hives all faced one way, and had no shade.

I do not say that Ohio, Illinois, Wisconsin or Canada should use these large hives, but am fully satisfied that in this locality we should try them awhile longer.

One of my queens kept 15 Simplicity frames brimful of brood all the time, and gave me 248 pounds of honey.

Hardin, Colo.

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Bees and Bee-Keeping in Iowa.

J. B. SYPHRIT.

I have just finished reading the BEE JOURNAL (No. 4). It seems to me it contains as much reading matter as many books for which we pay our dollars, and every sentence right to the point. It is strange how it can give so much excellent reading matter for less than two cents. The new dress and form that it takes this year, with the additional reading matter, makes it 50 per cent. more valuable than ever, in my estimation.

I commenced last Spring with 38 colonies of bees, and increased them to 42. I had them strong in numbers when fruit bloom came, but it was so cold and windy we obtained nothing from that source, and the consequence was no fruit. White clover appeared to be more abundant than usual, but there was no honey in it. The alsike gave a good flow for a few days, then the dry weather with the scorching sun, dried it up. Basswood was not worth anything for honey; buckwheat and Fall flowers gave very little. I got about 500 pounds of nice alsike honey in sections—did not extract any.

The dry weather, with hot winds—which were the most severe I ever witnessed—dried up the flow of nectar, which stopped breeding, and gave us nearly all old bees for Winter. I do not know how it may come out about the Spring dwindling. I intend to feed mine, and have them breed and replenish the hive with young bees, by the time I take them out of the cellar.

I put my bees in the cellar about Dec. 1. I examined three of the weakest colonies yesterday, and found them in good condition, with nearly as much honey as when I put them in their winter quarters. I got some California honey which I intend to feed to them next Spring, to build them up for early bloom.

White clover does not appear very promising here. I believe the drouth has annihilated the most of it. Alsike clover appears to be all in good condition. We have had considerable rain and some snow this Winter. Crops of all kinds, as well as honey, were a failure in Southeastern Iowa, but I am too enthusiastic to harbor a thought of giving up my bees. I would as soon think of giving up my farm, for my farm-crops were a worse failure than my honey crop. There are not many bees in this locality, and most of them are kept on the "take care of yourself" plan. They are left standing in old boxes from year to year.

If there is a good season, and a swarm comes out, they hive it in some old box, and when there is honey they take it in some way, and in almost any shape. Many of their bees die from pure neglect, as the old boxes are left standing with the old comb in them to breed millions of moths annually. This is bee-keeping without bee-literature. Some of those men know all about bee-keeping when you approach them, and talk to them about bee-periodicals.

As one extreme follows another, after this, the poorest season in 25 years, I hope for at least an ordinary crop of honey the coming season ; but the Spring of 1890 seemed to be everything that a person could wish for, with fine prospects for a prosperous honey season. I have some sweet clover that will bloom this season. I have about 40 acres that has a good portion of alsike clover, and I am going to sow six acres of Japanese buckwheat, and with the abundance of wild flowers that produce honey, hope to get enough to supply my bees next Winter. Some men keep bees for pleasure, others keep them for the profit that is in them. The last season I have had a good supply of pleasure without honey, and next season I would like to have my pleasure so well mixed with honey as to have no pleasure taste in it.

I cannot understand why it is that we have so many practical apiarists in the United States and Canada, and yet so small a per cent. belong to the Union. I think it is to the interest of every one who is friendly to bee-keeping, to be a member of the Union. It is true, we made nothing from our bees last season, but a bushel of potatoes, or five dozen of eggs will more than pay dues to the Union for one year.

I am well pleased with the idea of a trade-mark for honey-producers, and hope the Union will take action in this matter.

Newport, Iowa, Jan. 28, 1891.

Peculiarity of a Queen.

F. SCOTT.

Last season, in ascertaining the condition of one of my colonies, I noticed that the bees were balling a queen, but upon examination I found it to be an Italian queen that had left a nucleus colony and gone in this box, which contained a Carniolan queen. Upon further examination of the colony, I found that there was nothing but sealed brood, and, as they had 3 queen-cells capped, I at once removed 3 frames and placed them separately in nuclei, giving to each a cell, thinking I would rear a nice queen or two.

Two or three days afterwards, I noticed the cells, and to my surprise one was torn down, and not thinking but that the bees had torn it down, for some cause unknown, as they sometimes do, I concluded to give them another cell next day, as I had not the time to bother with it at that moment. So 3 or 4 days passed before I had taken time to supply the vacancy. But by and by, when I got a cell and lifted out the frames, to my great surprise, by an accidental look in the cells, I found they contained eggs and larvæ of various ages, up to five days old.

The queen that I supposed was about to be superseded by the stray Italian, was at work in this nucleus, and why she had failed to perform her egg-laying duties at least eight days prior to my looking in the hive, when I found the other queen balled, or what she could have been doing all this time, or just how the workers acted toward her, is something that I am not able to answer. She left the hive full of sealed brood, and when liberated by mistake from the other queen, and placed in the nucleus, she at once began to lay.

I have suggested to others that when the Italian queen came in it frightened the Carniolan queen, and she at once ceased laying, but was unable to get to the other as her visitor was balled, and when placed in the nucleus, and finding that she was again free, and ruler over the little hive, she at once began to perform the duties required of her.

The balled queen was pretty well worried, as I caged her and found her dead the next morning. If any one has experienced anything of a similar nature to the above, I would be glad to hear the cause and results through the BEE JOURNAL.

Cloud, Ohio.

Season of 1890 in Maine—Other Topics.

J. F. LATHAM.

In this locality a retrospect of the season of 1890 is anything but pleasing, from a financial point of view. When the reward for the care of 57 colonies of bees, for 6 months, is about 500 pounds of second-class honey in the comb, and an increase of 8 colonies, by swarming, and this, too, after feeding 600 pounds of sugar and honey for Winter stores, there are very slight grounds upon which to dispute the above statement.

The weather for the past season was the most unfavorable for bee-keeping in my experience. The bloom was profuse, but clouds and rain, with cold nights, kept one in a continual state of suspense. When an interval of pleasant weather occurred to stimulate the efforts of the bees, a sudden change would confine them to their hives, thus causing a cessation of their labors. Attempts to aid the little workers by handling, proved unsuccessful, except in a few instances, where the colonies were very strong, with a large surplus in the brood apartments.

Had I kept supers away from my hives, and worked for extracted-honey, I should have hit the nail squarely on the head, and would have obtained my small quantity of surplus honey in free bulk, instead of in about 1,000 sections, of which only about 200 were in marketable condition, the remainder ranging from empty to one-half full. Some of the partially-filled sections were given to the bees for Winter stores, a portion were sold, and the remainder, after extracting the honey, were stored away for future use.

My experience in the past season has disclosed many points that I have not seen discussed in the bee-periodicals in a manner calculated to evolve methods of procedure suitable to the exigencies of the times, and I am led to believe that it is beyond the power of man to devise a system of manipulation which will prove satisfactory to apiarists under such adverse circumstances.

When the honey season ended, my hives were full of bees, with combs containing from about 1 pound to 10 pounds of sealed honey. After feeding from 5 to 15 pounds of syrup and honey, as required, to each colony except 3, they were packed in my usual way, and at present, Jan. 14, appear to be wintering excellently, notwithstanding the severity of the weather.

If my bees pass through this Winter as well as they have wintered heretofore (and I have yet to note the loss of the first colony from bad conditions), my faith in a proper method of preparation to insure the right wintering conditions, as opposed to the "pollen theory," will receive additional confirmation.

I firmly believe, with Mr. Heddon (see page 47), that "if we keep our bees in such condition that no special temptation for pollen consumption is present, they will Winter well." If a "low temperature is a prime cause of bees consuming pollen," it certainly must be *the* prime cause of any malady that might emanate therefrom. If I am not in error in my deductions, Mr. Heddon's loss of bees is due more to the climatic influences of his locality than any other cause, and when compared with losses in many other localities where climatic conditions conform more nearly to the physical requisites of the bees during their Winter repose, the axiom seems comprehensive in its general bearings.

I am not personally acquainted with Mr. Heddon's apiarian environments, but think, nevertheless, that if he has not observed the meteorological status of his surroundings, from year to year, since he has kept bees there, he will, on doing so, find sufficient reason to attribute a portion of his Winter losses of bees, in the past, to other causes than the presence of bee-bread in the combs, or floating pollen in the honey, unless the pollen in his locality contains virulent properties, or is contaminated by local causes after it is stored in the combs.

True hibernal requirements do not stimulate, in bees, a desire or appetite for nitrogenous aliment. Winter, in the temperate zones, is a natural term of rest to the vegetable species, when in their special sphere, as when in concert with the animal organism, to which they supply the functional motor; and both, in their separate spheres of action, are subject, in a greater or less degree, to climatic control. Therefore, if bees during the hibernal period, are supplied with the requisites of a comfortable repose, the needs of their natures are met, and nothing else is necessary to accomplish the designs of nature during that special period of their existence. During the Winter repose, there is no perceptible depreciation of vitality in a normal organism. Bees will exercise their instinctive functions as vigorously in early Spring as during mid-summer.

Cumberland, Me., Jan. 14, 1891.

Advantages Derived from Honey Exhibits

R. M'KNIGHT.

Industrial exhibitions are among the institutions which have come to the front during the last half of the nineteenth century. Many of them are cosmopolitan in their patronage and character. People from the remote corners of the earth, as well as those from the most enlightened nations, contribute to their displays, and make them huge object lessons upon which all may gaze, and from which much may be learned.

Each department of a general exhibit is specially instructive to him whose interest is centered in it. While the general information of all is enlarged by the contemplation of a full display of the products of the field, the forest, and the workshop.

The prime object of all such exhibitions, is to educate, to advertise, and to excite to greater excellence by emulation. All of which results flow from public displays of honey. These advantages are not confined to the simple onlooker, but are realized in a higher sense by those who make them.

Let us glance for a moment at the educational effects of honey shows upon those who make them, and their advantages to bee-keepers generally.

The exhibitor, having prepared his goods with all the skill and care at his command (a work which, in itself, is a course of self-improvement), has it conveyed to the place of exhibition, and in so doing learns a lesson on the best method of transporting it.

Having set it up, according to his preconceived ideas of what is best, it stands forth in its outlines, proportions and design, his ideal materialized. But it is not perfect, for he now sees in the work of his fancy, and the labor of his hands, defects here, and mistakes there which it is too late to remedy, but which he can and will correct in the next. So he profits by his mistakes, and takes another step towards perfection.

Each exhibit we make should be an improvement in its general features upon those previously made—not, necessarily, in the quality of the honey itself (for good honey is not susceptible of much improvement), but in that which enhances its appearance. Defects in style, finish and quality, of bottle, tin and case, will be noted, and subsequently corrected, if we hope to keep pace with the times.

Thus we learn practical lessons, and go on perfecting ourselves in the art of display.

By exhibiting, we become self-instructors. Exhibiting will emphatically teach a man the value of appearances. "The feathers make the fowl" is a trite and true saying. An otherwise beautiful woman is greatly discounted by being clothed in a frowsy frock. Good honey is no less disparaged when put up in ill-conditioned packages.

If our exhibit is devoid of taste, we are apprised of the fact by looking upon the neatness of our neighbor's display, and our scrutiny will be all the more keen from being brought into competition with him. If we fail to learn a lesson here, we do not know how to learn. We will assuredly realize the cost of indifference to appearance so soon as the judges have completed their work; for judges, like other mortals, are unconsciously biased in favor of beauty—external though it be.

The man who has once set up a public display of the products of his apiary and failed to teach himself something thereby, has demonstrated the fact of his own obtuseness, and should retire from the ranks of competitors.

As a rule, exhibitors are among the most advanced, practical bee-keepers, and their combined displays will give practical hints, and afford food for thought, to non-exhibitors among the fraternity. The combined experience of the former stand out before the latter in the exhibition, and if they leave the ground without carrying away with them something they may profit by, they must have attained an enviable degree of perfection in much that pertains to their business. I venture to say that every bee-keeper who is anxious to familiarize himself with the best methods of putting up honey for the market, will, by a careful inspection of a good honey show, see something to commend itself to his consideration, and which it will be profitable for him to adopt.

The honey-house becomes a classroom in which the bee-keepers at the Fair meet and take counsel, the one with the other. As a rule they find in it all the equipment the class requires to aid it in its work of mutual instruction. The business, in all its branches, is discussed. Defects are pointed out, and improvements suggested. The articles on the tables are not the only things discussed—the whole bee-keeping business is canvassed—not systematically treated, it is true, but probably talked of in a way in which there is more practical knowledge imparted and received than if it was done in convention order.

"Bee talks" are indulged in without stilted speeches being made, and mutual acquaintance is established between kindred spirits. There is gained the educational advantage of communion with those whose thoughts and tastes run along the same lines, for "as iron sharpeneth iron," so does the bee-keeper his fellow. Every honey exhibition becomes a social reunion, where old friends meet, and new ones are made. In these respects honey exhibitions are not a whit behind the more pretentious convention.

EXHIBITS AS ADVERTISEMENTS.

Public exhibitions of honey are the best and most profitable mediums through which it can be introduced to the consumer. The benfits that flow from them in this respect are not confined to the exhibitor, but are felt by the whole brotherhood. Still, they are sufficiently profitable to make it a matter of self-interest to exhibit when a good opportunity presents itself—more especially is this the case when the exhibitor is a large producer. In no other way can he advertise his wares at such a trifling cost as by piling them upon the show-table.

He may advertise in the public papers, or he may send circulars and price-lists into the homes of the people, but the most effective way to place his goods before the public is to display them where they may be examined and tested. The exhibition presents an excellent opportunity to do this. The secret of making sales, is to secure inspection; once get people to handle and taste, and sales will follow where no purchases were intended. A good customer once made in this way, is apt to be retained if properly treated. A man's reputation as a successful competitor inspires confidence in the merits of what he has to sell.

I make a point of keeping the name and address of every stranger to whom I sell a certain quantity at such places. If I cannot be on the ground the following and subsequent years, I apprise my former patron of the fact, remind him that I can supply his present wants, and quote prices. In this way I have made, and kept, not a few of the most satisfactory kind of customers.

The permanent extension of one's trade is one of the advantages reaped by the exhibitor, but it is not the only one. The press takes note of his display, if it be good, by which an extensive and gratuitous advertisement is secured. The bare publication of the prize-list brings his name before the public, and keeps it there as long as he continues a successful competitor.

While he may not be sufficiently public-spirited to wish a benefit to flow to others from his displays, he is, nevertheless, doing that which promotes the sales of his brother bee-keeper. Tens of thousands of people may look upon and admire his honey, and but few purchase, or leave an order with him. As a rule, he only sells to the people of the town or city in which the show is held. The thousands return to their homes with an appetite whetted for that which before they had not thought of indulging in, and become purchasers from local bee-keepers. I am convinced that exhibits have done more to popularize honey and promote its sale, than all other means employed to this end.

To be effective, exhibits must be imposing; and to be imposing they must be large. Herein the honey exhibit differs from that of many other things, in making it serve the purpose which is intended. In showing a good threshing machine, the manufacturer's purpose is just as fully attained as if he displayed a hundred similarly constructed machines, but the exhibition of five pounds of honey, however good it may be, will do little to increase sales.

Such a display is no evidence of the excellence of the exhibitor's honey crop, any more than the display of half a dozen big carrots and a monster pumpkin is a guarantee that the general crop of the man who shows them is better than that of his neighbors. We are apt to think that his pet pumpkin was grown by the side of a sunken barrel filled with liquid manure, and kept filled, so that the vine upon which it grew had, throughout it sseason of growth, all the stimulating food it could appropriate, and that his bunch of carrots attained their extraordinary size by similar treatment. A wagon load of his pumpkins, or his carrots, on the market place would be, to the intending purchaser, more conclusive evidence of the quality of his crop. So it is with honey. In exhibiting it we should never lose sight of the fact, that magnitude and merit are alike indispensable if we are to secure, to the fullest, the object sought.

The foregoing essay was read at the Michigan State Convention, and following is an extract from the note to the Secretary, which accompanied it, and which is referred to by Mr. McKnight, in his article on page 224:

I have sent by concurrent post two photographs of exhibits made by me at the Industrial Exhibition, held at Toronto—one in 1888, and the other in 1889. I do this to show you that I practice what I preach, as far as honey exhibits are concerned. They are but faint shadows of the substance, because the light in exhibition buildings is not conducive to good photography; still, I think I have known of some exhibits no better than these being published to the world. The exhibit of 1888 was about 16 feet in length, and occupied the entire surface of the table. It had, therefore, two faces, one only of which is shown. That of 1889 was about 20 feet long, and occupied but half the width of the table. It had, therefore, but one face.

The exhibit of 1888 brought me $78 in cash prizes, and a silver medal. That of 1889 brought me $98 in cash prizes, and two medals. I believe this to be the largest sum in cash prizes ever received by one person for a single exhibit of honey. The credit is not mine, however. It belongs to the Toronto management, whose prize-list made this possible.

R. McKNIGHT.

Owen Sound, Ont., Dec. 20, 1890.

Bee-Keeping and Small Fruit.

O. H. SWEZEY.

Bee-keeping is rather too uncertain to be made an exclusive business, and there are few who profitably devote their whole time and attention to it. But what shall we combine with bee-keeping? What pursuit is most suitable to fill up the spare time, and to depend upon for a livelihood in case the season is a poor one for the bees?

This will depend upon how a person is situated, and what he is capable of doing. The majority of bee-keepers, I think, are farmers, and, of course, have the products of the soil as a reserve in case the honey crop is a failure. This seems to be about the best combination.

But by those living near large towns or cities, and having only a small tract of land—five or ten acres, perhaps—"small-fruit raising in connection with bee-keeping," may be made a profitable industry. Of course, this combination has its disadvantages; but it is difficult to choose a pursuit which does not conflict with bee-keeping, in some way or another.

Usually, the small-fruit business requires the most attention about the same time that the bees do. In the Spring the berry patch requires attention—pruning the raspberries, setting new plants, cultivating, hoeing, etc.; the bees also need to be looked after to see that they have plenty of stores, and are prepared for the honey harvest. But the fruit-raiser will probably get along all right until strawberries commence to ripen. The bees begin swarming about the same time, and if it is a good season for both bees and small fruits, he will have his hands more than full. If he is engaged in the business to any extent, he will need an assistant to oversee the work in the berry patch while he attends to the bees.

Of course, the berry boxes should be nailed up during leisure time in the Winter, and hives, supers, sections, etc., should also be prepared for the busy season. It would also save much valuable time to have the berries contracted for, instead of peddling them. By having a regular contract for the berries, the bee-keeper can market them early in the morning before the swarms come out.

Of late years bee-keeping has been unremunerative about two years out of three, and fruits also fail sometimes; so that the two are not liable to interfere with each other so very much, except about one season out of three.

Raspberries are remarkable as honey-plants. It would almost pay to raise them for honey alone. I think it is the universal opinion that raspberry honey is unsurpassed in flavor or color. Some describe it as amber color, others as straw color. I should say it was a very light amber.*

The bees, becoming accustomed to going to the raspberry patch for honey, are apt to come around when berries are ripe, if there is a dearth in the honey-flow, and the berries are allowed to become over-ripe. They sometimes do considerable damage to the red raspberries, besides frightening timid pickers from the patch. There is no danger of being stung, however, unless you get hold of a berry having a bee on the under side.

To offset this the bees are of great importance for the part they play in the fertilization of the blossoms. The largest and best varieties of strawberries have pistillate blossoms; therefore, they require the aid of the bees for proper fertilization.

To sum up, bee-keeping and small-fruit raising are well adapted to each other in some respects, and in other respects they are not, and it will depend very much upon how a person likes the combination, and how thorough a knowledge he has of each branch, whether he makes a success of it or not.—*Read at the Northern Illinois Convention.*

[*Amber is a very indefinite term, to represent color. Webster says: "In color, it is white, ash-gray, yellow or black, and often variegated like marble." The word "straw" gives a definite idea as to color, and is far preferable to the word "amber."—Ed.]

Canadian Honey at the Columbian Fair.

R. F. HOLTERMANN.

Political discussion should always be avoided in any but political papers, political meetings, and the houses from which emanate our laws; and, very often, if the discussions were less heated in even those places, the country would be better off. For the above reasons I am not embracing the cause of any party, rather forging ahead of what they are divided upon at the present day.

All appear to agree that we desire reciprocity in natural products—that is, Canada and the United States. Some will go farther, but few appear to fall short of this. Under these circumstances, we should have the two countries thrown into one market for honey, and it appears to me the same should hold good for beeswax.

If such be the result of negotiations between the two countries, I think the best bee-keepers in Canada will be pleased, for we flatter ourselves that Canadian honey, on an average, is superior to that produced in the United States, as, in the latter country, you have very large tracts, which, owing to the peculiar conditions of climate and soil, produces honey, excellent rather for baking and cooking than for the table. On the other hand, in Canada, second quality, or perhaps, more correctly, dark honey, is so scarce, and the supply so uncertain, that biscuit manufacturers, etc., who have used it for a time, have given it up, and when the season favors a full flow, we hardly know what to do with it.

A sure source of supply would benefit us in consumption of the article by manufacturers. The United States bee-keeper will then gain in securing a market for dark honey, and I believe the Canada bee-keeper is willing to run his chances in securing a portion of the market for his light honey in the United States.

Doubtless there will be enthusiasts in both countries, who will deny this, but I am not seeking to say something which may tickle everybody. I only state my views.

If the above is correct, and meets with the views of our Legislators and bee-keepers, the World's Columbian Fair may look to Canada to make an exhibit of honey at Chicago. Should such not be the case, I fail to see that it would be to the interest of Canadians to make an exhibit and compete for any other prizes than those for quality, a sufficient quantity of which might be sent and kept over for months, running the risk of fire, transport, etc., without materially affecting the pockets of the apiarists.

We must look at the question from a business stand-point—it is a matter of business entirely.

Romney, Ont., Feb. 10, 1891.

Apicultural Notes from Nebraska.

J. M. YOUNG.

All our extracted-honey is candied, but, fortunately, it is in large-mouthed cans.

The temperature has reached zero on two nights this month, but the weather is warm again, and the bees were out yesterday and the day before.

A few days since, I received, from Denver, Colo., the first alfalfa comb-honey I ever saw. It is hard to beat in color and flavor.

I have a book in which I register the names of Nebraska bee-keepers as fast as received. The list now contains nearly 450 names, and I hope to continue making additions until I have the name of every bee-keeper in the State.

That trade-mark idea is, perhaps, a good one; but a reputation for fine goods and honest weight, is of more importance to the average apiculturist.

Last year I followed Mr. Root's advice, and had a garden in connection with my apiary. It proved to be a profitable venture, as I received good prices for my vegetables, it being an off year for gardening. I shall repeat the experiment this year.

Some time since I received a postal card from G. M. Whitford, of Arlington, stating that I might expect a call from him on his return from Red Oak, Iowa, but I was disappointed.

Visiting bee-keepers should remember, when they reach the depot (if they come by rail) that my apiary and grounds are 1½ miles south of Main street, near the southern limits of the city. They must not expect to see a place like A. I. Root's, and conducted on a large scale, but look for a more modest establishment, and they will not be disappointed.

My chaff hives are 20x21 inches in size, and two stories high, each story containing frames of the same size—9⅛x17⅝. The upper story can be taken off or not, as the operator may choose, in handling the frames. The lower story is packed with chaff, when the hives are made, which remains there permanently. I have wintered my bees in just such hives for a number of years, and with good success.

The Nebraska *Bee-Keeper*, hailing from York, Nebr., deserves recognition as a spicy little magazine, published in the interest of the pursuit. Its editor is an experienced bee-keeper.

Plattsmouth, Nebr., Feb. 7, 1891.

Handling the Closed-End Frames.

W. M. WOODWARD.

On page 51 of the present volume of the BEE JOURNAL, Rev. W. P. Faylor gives his experience with the closed-end frame, and his views on the same. He says, also, that he should "like to hear from others who have experimented on this line."

I have been experimenting "on this line" for the past five years, with somewhere about 50 hives in all. I have tried all depths of frames, from 9-inch end-bars down to 5¾ inches, and widths from 1¼ to 1½ inches. I have tried clamped frames, just as described by Rev. Faylor, pretty largely; but I drive two wire nails in each end of the side boards, instead of one, and place about one-fourth the width of the board from each side, as they hold the frames more firmly. I make the ends to project ¼ of an inch beyond the top and bottom bars, and stand the frame, as he says, upon the bottom-board of the hive.

Now, as to results: In the first place, for comb-honey exclusively, and in connection with cellar wintering, I find that 1 5/16 inch ends give the best results. But, as Dr. Miller has said, old comb is thicker than new. Now, when we apply this spacing to the production of extracted-honey, and use old combs at all, the bees do not find room to extend the cells enough for the uncapping knife to glide over the cocoons, and the spacing is thus shown to be too narrow for an all-purpose hive. In fact, I am satisfied that a spaced frame, of any width, is not quite the best thing for the production of extracted-honey. In working for comb-honey, it offers advantages in the use of side-storing (I practice this with new swarms only), which can be had in no other way. On the whole I prefer to use 9 frames, 9 inches high (that is, on the end-bar), and the length of the standard Langstroth hive.

These hives are clamped by a wire loop drawn over 4 nails, and tightened by drawing the centers together; and keyed up by means of two ⅜-inch blocks about 2 inches long, with two saw kerfs to slip over the centers of the wires. They are then spread to tighten up. For nuclei I use strong twine, instead of wire.

And now, my final conclusion is this: That in the bee-yard, so long as the bees are kept on the frames, or the hive handled as a whole, this hive is the most satisfactory one I have ever found. It has all the advantages claimed for it by Mr. Ernest Root, and more; but when we make use of it for extracting purposes, or have to handle the frames for any purpose, off of the hive bottom-board, it at once becomes an unmitigated nuisance. The frames cannot be handled with any satisfaction at all.

This fact, after five years experience, has driven me to the opposite conclusion from that of Rev. Faylor, where he says: "I do not think it practical to use closed-end frames inside of box-enclosures." I cannot endure any rattle-trap fixtures about the bee premises; and, for that very reason, I am doing away with the clamped frame, and substituting a closed-end frame just like the other, but enclosed in a plain box of ½-inch lumber, and made flush with the end-bars, when the material is thoroughly dry. This gives me a reversible hive, by first placing an extra bottom-board upon the top before reversing, after which the original bottom is removed, and a plain board cover substituted in its place. The frames stand in the box, upon a strip of galvanized sheet-iron; and they are made flush with the top of the bee-space, so as to form a bee-space above and below for reversing, and to keep the propolis off the hive box. And it keeps the propolis off so well that I find that I can easily start the frames loose, in most cases, with my fingers.

The hive box is nailed on one side, and the ends are placed outside. The other side is fastened in by means of common round-head screws and washers. The screws are set two in each corner, just the same as the nails in the opposite side; and they pass through a slot cut into the end-piece, and draw down upon it and a washer. This makes a firm, strong joint, while it leaves the side-board movable; so that by loosening the screws just a little, it can be taken right away.

Thus, on one side, I have nearly all the practical advantages in manipulation, which are obtained by the other plan; and escape a lot of loose traps to handle whenever the hive is unkeyed. The arrangement, on the whole, pleases me much better, after a trial of three seasons, than the other hive does.

Now, as to the spacing: The narrowest spacing that will allow the bees to extend the cells beyond the cocoons enough to allow of the free use of the uncapping knife, will give the best satisfaction. From what I have observed, I think that is as near 1⅜ inches as you can get at it. But that does not work in a 12-inch hive (inside). It is, however, just the thing for a 14-inch hive, allowing a cleat, or fillet, ⅛ inch thick, upon each side of the hive, to preserve the correct bee-space around the frame. And, for those who wish to use a 14-inch hive, I believe such an arrangement will give as good, or better, satisfaction in the end, than any other that I know of. I will state, further, that this is somewhere about the twentieth form of hive that I have tested within the last eight years.

Bonfield, Ills.

Advantages of Honey Statistics.

GEO. H. KNICKERBOCKER.

I suppose by honey statistics that your Secretary had in mind a collection of facts and figures embracing the increased or diminished number of colonies going into Winter quarters, loss in Winter and Spring, condition of bees at the beginning of the season, proportion of full crop of honey gathered—both white and dark, comb and extracted; the quantity of honey remaining unsold in the different markets, with price, etc., as all this information is essential in obtaining a reliable and accurate report of the honey crop.

Their advantages to the bee-keeper are many and varied, and, besides the advantages, it is something of a satisfaction to know, as soon as the crop is harvested, about how much you will receive for it.

The Northeastern Bee-Keepers' Association (now New York State) made the first attempt to collect statistics of bees and honey in 1873. But I believe that the best and most practical plan yet devised originated with the formation of the United States Honey Producers' Exchange, Jan. 19, 1888.

By having a good corps of reporters in each State, we are enabled to tell, almost as soon as the crop is gathered, whether it is a short or a heavy one; and by comparing the reports of the present with those of the past year, members can obtain quite a clear idea of what the market will be, and thereby sell their honey intelligently, and if the crop is a short one, at better prices than they otherwise would have been able to obtain.

It also posts the commission-houses and buyers as to the extent of the honey crop throughout the United States.

One of the largest honey-producers in America remarked, during the past season, that the Exchange was the best thing that ever came from a convention of bee-men. It has already saved many a dollar for a large number, if not all, of its members, and I believe that if the work is properly carried out in the future, it will do more to help the honey market than anything yet devised.

I am fully assured that, a year ago, the New York and Boston markets opened two cents per pound higher for comb-honey than they would, had it not been for the Exchange, and that price would have been sustained had the dealers in the different markets (especially those in the West, where there was a good crop) had sufficient confidence in its reports.

It was not the intention of the originators of this plan of gathering information to make a corner in the honey market, or raise prices as high as they were some years ago, but that we may obtain better prices in years when there is a scarcity.

For instance, there was no honey carried over from 1889, and, with a decidedly short crop this year, the bulk of choice white comb-honey, in pound sections, could just as well have been sold at 20 cents as at 18 cents, had the teachings of the Exchange been followed.

The season of 1887 illustrated the other extreme. It was generally stated in the bee-periodicals that there was a very short crop of honey, and some went so far as to say that they expected honey to sell at 25 cents per pound, wholesale, before the opening of another season.

It was true, there was a very short crop in certain parts of the West, but there was an equally good one in the East, and I know of several bee-keepers that held their honey—relying on the correctness of these reports—until January or February, and then sold it for several cents less per pound than they could have obtained in the Fall. It was plain enough that no one in particular was to blame for this condition of affairs —the facts had not been ascertained.

That the gathering of statistics is a great boon to the progressive bee-keeper, and that the formation of the Exchange is a move in the right direction, I think but very few, if any, present at this convention will deny.

But as I write this I think of the much broader field of usefulness and the room for improvement that is open on every hand, as soon as it has sufficient funds to carry out the work; and I shall not feel entirely satisfied until the Exchange reports shall be in the hands of every intelligent bee-keeper in the country, and it has a separate report, in pounds of honey produced, and the number of colonies, from at least *one* of the most progressive bee-keepers in each county in the several States.—*Read at the Detroit Convention.*

Cause of Failure of the Honey Crop.

C. F. MUTH.

The reason given by most writers for the very short honey crop in 1890 is, that the white clover blossoms had a poor secretion. My observation differs from that of most writers on the subject. For the sake of argument, and the benefit derived from comparing notes with others, I will give my experience of the season.

By a close comparison with his own experience, every bee-keeper will know whether I am right or wrong, or whether conditions in the neighborhood of Cincinnati were the same as those in the neighborhood of the reader.

The Summer of 1889 gave us a poor honey season over almost all of America. A good crop can be recorded from California only. Colorado, perhaps, comes in next for a good yield from alfalfa, but the enterprise being new, and bee-keeping not yet developed, the quantity produced did not amount to very much. Only a very small crop was harvested from white clover in the Southern part of Ohio, and almost no honey whatever from Fall blossoms, such as asters, golden-rod, smart-weed, heart's-ease, etc.

The Winter of 1889–90 was very mild, with the coldest spell in March. Being well supplied with stores, our bees kept breeding all Winter, and the majority of my colonies had 5 to 6 combs filled with brood in March, the same as had been the case in May of previous years.

We know that nothing is more exhaustive to stores than the rearing of brood, and I claim that the difference in the consumption of honey between bees wintered out-of-door and those wintered in the cellar, is not worth talking about until brood-rearing has commenced. Those rearing the most brood consume the most, as a rule.

The most of the colonies in Southern Ohio had consumed their stores by the beginning of April, and many colonies starved in May, 1890, an occurrence at that time of year which has not yet come within the experience of many bee-keepers.

The cold, wet spell during the bloom of fruit trees, in the latter part of April and the beginning of May, prevented the bees from replenishing their depleted stores, and with their natural foresight to self-preservation, they promptly prepared for coming hard times by commencing to pull out their larvæ. As a natural consequence, bees had reduced their numbers so much that a good honey crop was out of the question, if the clover blossoms were yielding ever so much.

With the month of June white clover commences to bloom, and with it begins, and ends, our honey harvest. Being of only four or five weeks' duration, it is of the greatest importance to the bee-keeper to have every colony very strong in numbers—and not in number of bees only, but in number of workers, *i. e.*, foragers —bees more than 8 or 10 days old.

Very few colonies were ready for the harvest in 1890. Most of them had less brood at the beginning of June than they had during March and April, and they just began to become strong by the time that the season was over.

Natural swarms hived on empty combs about the middle of June did admirably. They filled their hives with brood to an unusual degree, but were minus all honey at the latter part of October. All such died of starvation before the Winter commenced, if they were not fed in due time. This is sufficient evidence of the failure of Fall blossoms to yield any nectar in our neighborhood, although there was an abundance of asters in bloom, golden-rod, smart-weed, heart's-ease, etc., and sweet-scented clover had been abounding as usual.

The above teaches us that our bees need the greatest care in March and April, and from that time on. It gives us ample time to bring the colonies up to their proper strength by the beginning of June. Earlier breeding is unnecessary, and undesirable in any part of the country where white clover is the principal source, and where the time of its bloom is the month of June.

Cincinnati, O., Feb. 11, 1891.

CONVENTION DIRECTORY.

Time and place of meeting.

1891.
Feb. 26.–Capital, at Springfield, Ills.
C. E. Yocom, Sec., Sherman, Ills.

May 7.—Susquehanna County, at Montrose, Pa.
H. M. Seeley, Sec., Harford, Pa.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—The Editor.

North American Bee-Keepers' Association

President—P. H. Elwood....Starkville, N. Y.
Secretary—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

President—James Heddon ..Dowagiac, Mich.
Sec'y and Manager—T. G. Newman, Chicago.

Bee and Honey Gossip.

Report from a Lady Bee-Keeper.

My bees did not do very well in 1890. I had 25 colonies in the Spring, but some of them had dwindled so much that the Summer was passed in recuperating. During the Summer 25 swarms were cast, and in preparing for Winter, I united them until they numbered but 34 colonies, all strong and with plenty of stores. I obtained 250 pounds of honey, of which I have about 150 or 200 pounds yet unsold, not having put any honey on the market, thinking that in the Spring better prices would prevail. We have moved into town, and I shall have to go out to the farm to attend to my bees. I love bee-keeping, and it is my delight to watch the busy bees.

Mrs. Martha Anderson.

Bushnell, Ills., Feb. 6, 1891.

Alfalfa Honey.

I have been handling bees for two years only. One year on shares, but the second year I bought the apiary, consisting of 65 colonies, in Simplicity hives. They increased last Summer to 83 colonies, and produced 4,400 pounds of the very whitest of comb-honey, mostly in one-pound sections, made from alfalfa bloom, exclusively. I have the advantage of a range of 3,000 acres of alfalfa meadow. How many colonies should it support?

J. W. Carter.

Wellington, Nevada, Feb. 5, 1891.

[Such an amount of alfalfa would give pasturage for almost an unlimited number of bees, we think. Will some of our Colorado bee-keepers give us their opinion on the question propounded?—Ed.]

Bees Wintered in a Grist-Mill.

Upon the topic of wintering bees, I desire to state some of the points which have come to my knowledge in Central Nebraska. Bees have wintered well on the summer stands, without any protection whatever, one of my neighbors having kept bees for 12 years, and always left them on the summer stands. He uses the Langstroth hive, and has the upper story ventilated. After taking the surplus, he spreads a single thickness of burlap over the brood-frames, and leaves them without any other protection. They always wintered well until last Winter. In the Fall of 1889 he had 26 colonies, 7 of which came out alive in the Spring, although the Winter was very favorable for bees, the weather being mild, and the bees had plenty of stores left. They were black bees, and they in-bred all the time. Last Spring I saw 2 colonies of Italian bees that had been wintered in Langstroth hives, and one of them had nothing over the brood-frames but a piece of cotton cloth, which covered 8 of the frames, and the upper story was empty. The hives were left on the summer stands, and the bees were in fine condition in April. The Winters beginning in 1886 and 1887, were very severe, and a colony of bees wintered in the north wall of a frame grist-mill, the wall being weather-boarding on the outside, and ceiling on the inside. They wintered quite well, although the weather was very cold in both seasons.

W. CHARLES.

York, Nebr., Feb. 2, 1891.

◆

Foolish Notions About Bees.

My husband has the only bees in Braceville, or its vicinity. He is called "the bee-man." One neighbor said, "What a job you must have to feed those 45 colonies of bees every day, this cold weather." Another asked me, "Where is John, to-day?" I told him he was at home. He said: "He is tending to the hatching of bees, I suppose." We are to move about one-fourth of a mile, in March, and the man that is to move in here, said he supposed he would be bothered with the bees coming to visit, all Summer.

Braceville, Ills. MRS. BURR.

◆

Hints to Beginners.

This is a good time to get hives ready for your swarms for the coming season. "But," says one, "What hive shall I adopt?" Well, the old orthodox advice is to adopt one kind of hive, and stick to it, but very few bee-keepers follow this advice! How many of even the big bee-keepers follow it? It appears to be human nature for the bee-keeper to do just about so much inventing in the line of bee-hives before settling down to some hive that was invented by a practical bee-keeper, who looked after the first cost of his hives. At the present price of honey, it hardly pays to make or buy costly hives, unless you use chaff-hives; then, of course, they will cost nearly double what you pay for single-walled hives, and while the chaff-hives have some advantages in the Winter, I prefer the single-walled hive every time. I have had great success in wintering bees on the summer stands, with chaff and straw protection, in common single-walled hives. I am very much pleased with the AMERICAN BEE JOURNAL. I like it because it gives both sides of bee-keeping. The Winter so far has been very mild, and favorable for wintering bees on the summer stands.

M. MILLER.

LeClaire, Iowa, Jan. 25, 1891.

Stand on His Own Reputation.

In my opinion, a trade-mark is not necessary for bee-keepers, and should it by any scheming once be attached to any of the adulterated honey on the market, it would be a very severe blow to bee-keeping. Let each bee-keeper create a reputation for himself, by selling a fine article of honey, properly graded, and marked accordingly, in this way building up a business, and creating a demand for his goods, his name and address being a sufficient trade-mark, guaranteeing both quality and weight. I should like to see all the bee-keepers' associations affiliated with the North American Bee-Keepers' Association, and then let all join together for good prices. We might elect three men in each State to fix a price for each grade of honey, and then let every bee-keeper hold the honey for that price—I do not mean a big price, but a good, fair one. What do you think of the idea? A. W. LINDSEY.

Buffalo, N. Y., Feb. 9, 1891.

[It seems to us that the suggestion concerning the election of an authoritative "triangle" for each State, to fix the price of honey, is utterly impracticable and any attempt to enforce such authority would, we fear, result only in a failure.—ED.]

◆

Wonderful, Indeed!

I have taken the AMERICAN BEE JOURNAL ever since I became interested in bees, and even bought the back numbers for three years. It has repaid me many times the price of the subscription. I wonder how you can publish that excellent magazine (the ILLUSTRATED HOME JOURNAL) for the money! Your large circulation must be your salvation.

R. F. HOLTERMANN.

Romney, Ont.

◆

Closed-End Quinby Hive.

Permit me to say to Rev. W. P. Faylor, that the closed-end frame he mentions, on page 51, as having experimented with, was invented and successfully used by Moses Quinby, in 1868, at Mohawk, N. Y., and my experience in bee-keeping ten years ago was mainly with the Quinby hive, but that would not warrant me in saying that success could now be attained with it, just as Mr. Quinby had it arranged. I believe, however, that success can be assured with the Quinby hive, and, consequently, I shall transfer my 20 colonies into Quinby hives the coming Spring, and the hives will be made just as Moses Quinby used them, with two exceptions: One is in the manner of clamping the brood-frames as close together as possible, which, I think, I have an improvement on, as Mr. Quinby used a stout cord in clamping the frames together; and, for that matter, I believe some noted bee-keepers of the present day use pretty much the same kind of a string arrangement. The other exception is in the arrangement of the super, or clamps, as Mr. Quinby termed them. This super will be arranged in such a manner as to enable any one to take it apart and put it together again in a very few seconds, when they once "get the hang" of it (so to speak). I hope to be able to report a success with these new arrangements during the coming season.

Wm. L. Backensto.

Fort Logan, Colo.

Needs no Trade-Mark.

I do not need any trade-mark more than I now use, which is, "Pure Honey, sold by W. Harmer, Manistee, Mich." I make a specialty of producing extracted-honey, and I think more of my name since the so-called California Honey has been put on this market. I always offer a good and pure article, and put my name on it, and people are beginning to inquire for my honey. What more do I want? Some of my objections to a trade-mark have already been mentioned in the Bee Journal. Let us hear from others. I only speak of my present trade, which is small. If I were in the wholesale business, perhaps I might view it differently.

W. Harmer.

Manistee, Mich.

Elms in Bloom—Young Bees Hatching

My bees are in fine condition, having had from 20 to 30 pounds of Winter stores, per colony. Elms are in full bloom, and wild peach will soon blossom, thus giving the bees all they can do from this time forth. I examined a colony a few days ago, and found that the young bees were hatching. We have a fine country for bees, and, if rightly managed, they will prove very profitable. From February to December there is an uninterrupted succession of blossoms. I use the Langstroth frame hive, and am perfectly satisfied with it. I have 150 colonies, and work for both comb and extracted-honey, using wide frames and tin separators, but shall soon discard the latter, as I do not like them. I have a good home market, and have sold all of my extracted-honey, and could have sold a great deal more, but have some nice comb-honey still on hand.

W. S. Douglass.

Lexington, Tex., Feb. 1, 1891.

White Clover Promises Well.

The honey crop of 1890 was almost an entire failure in this section. A number of bee-keepers obtained no surplus at all. My apiary, from which I obtained 4,000 pounds in 1889, yielded less than 300 pounds in 1890. The hot winds and drouth ruined the Summer crop, and the frost in September cut off the Fall crop, the consequence being that a number of colonies starved before Winter, and, unless they are properly cared for, many more will perish before Spring. I fed 26 colonies out of 69 before putting them in the cellar, and shall feed them again in early Spring. I feel hopeful for next season, as all my colonies seem to be in good condition at this date. At present, the prospect for white clover is very good.

J. W. Sanders.

Le Grand, Iowa, Feb. 6, 1891.

Sweet Clover for Honey.

Bees are wintering very nicely here. We have had but three days of what we could call Winter, so far. We have alfalfa and sweet clover both growing here, but the bees will not work on alfalfa. I have kept bees about 18 years, and have never seen a honey-plant equal to the sweet clover. The honey has a very fine flavor, and the comb is snow white. It blooms about the middle of June, and lasts until frost kills it.

M. S. Roop.

Council Bluffs, Iowa, Feb. 6, 1891.

The "Trade-Mark" Absurdity.

"Great minds often originate absurd things," and this will, doubtless, apply to the author of the "trade-mark" theory. I am heartily in favor of the adoption of any legitimate measure for increasing the sale of honey, especially in view of the fact that during the past four years I have handled over $100,000 worth of comb and extracted-honey. In not one instance, however, have I received honey, which, to my knowledge, was adulterated. I have sold to both experts and consumers, who would discover any adulteration, and have, thus far, received no complaints. Were a "trade-mark" used, I would view each shipment with suspicion, fearing that adulteration might be practiced, while relying on the "label" to avert suspicion. Adulterators here, who put up glucose with a piece of comb therein, would welcome a trade-mark, for, if they could not obtain the original, they would counterfeit it. Not one idea can I advance in favor of its adoption, but if any arguments to the contrary are desired, I would be pleased to contribute further in that line. S. T. FISH.

Chicago, Ills.

Worthless (?) Black Bees.

The statement is made that in Minnesota the honey crop was a failure last year, and such may have been the case in some portions of the State, but in this section the season was good. I received 40 colonies from the Southern part of the State, last May, all black bees. They increased by swarming to 86 colonies, and gave me about 2,000 pounds of fine honey in one-pound sections. What the results would have been, had they been Italians, no one knows. I have always been in favor of Italians, but I have some blacks that would give them a hard rub for given results and fine finish of work. I procured a few Italian queens, and introduced them in August, some of them giving good results, but one was an old cripple, although I did not discover her condition until I had removed and killed a fine young black queen.

> The Italian bee has gaudy wings,
> The Carnys have the fame,
> The black bee has no friends at all,
> But it gets there, just the same.

This has been a fine Winter for bees, either inside or on the summer stands, there being no snow, and the mercury having gone down to zero but once. M. S. SNOW.

Osakis, Minn., Jan. 29, 1891.

Bees are Doing Well.

This has been a mild Winter thus far, and bees are doing well. Some colonies have the diarrhea. Bees all through Northeastern Ohio are short of stores, and, if not cared for at the proper time, a goodly number of them will die of starvation. The failure of the honey crop for the last three years, has been very discouraging to bee-keepers generally. J. OSWALT.

Maximo, Ohio, Feb. 4, 1891.

Bees Gathering Pollen.

We have had 10 or 12 days of warm weather, which has caused alders to begin blooming. My bees have commenced work on this bloom, and are carrying in pollen right along. Some of my strongest colonies are rearing brood, and I fear that this warm spell, and the gathering of so much pollen by the bees, will cause the queens to start too much brood, as we may have some very cold weather yet. Our next bloom will be on the maples, and it will occur soon if the weather continues warm.

JOHN D. A. FISHER.

Faith, N. C., Feb. 10, 1891.

Three Poor Seasons.

The last three seasons have been remarkably poor ones for bees, but the one just passed was the worst of all At times everything looked favorable, and hope would rise high, but we were doomed to disappointment. Clover yielded but little more than a living for the bees, and our last hope was the basswood, which was well laden with buds and blossoms, and in ordinary seasons would have yielded tons of delicious honey, but it contributed nothing to the stores of the bees. However, I shall not give up in dispair yet awhile. I put 70 colonies in the cellar on Dec. 20, in good condition for wintering, and hope for more favorable results next season.

JOS. SUMMERS.

Columbia City, Ind.

Kansas State Association.

The State Bee-Keepers' Association of Kansas, was organized at a recent meeting held at Olathe, for that purpose. The meeting was called to order by P. Schaub, of Olathe. Rev. J. W. Bishop was chosen President *pro tem.*, and L. Wayman, Chanute, Secretary, *pro tem.* A Committee on Constitution and By-Laws having been appointed, the convention adjourned until 1 p.m., at which hour the President called the meeting to order, the report of the Committee on Constitution and By-Laws was received, read and adopted. Election of officers being next in order, the following persons were elected: President, J. W. Bishop, of Olathe; Vice-Presidents—P. Schaub, of Olathe; J. B. Cline, of Topeka. Secretary, L. Wayman, of Chanute; Treasurer, Mrs. H. P. Fisher. After the transaction of other important business, the association adjourned to meet with the Horticultural Society, in

December next, time and place to be determined, due notice of which will be given. All bee-keepers in this State are requested to send in their names, and have them enrolled as members. Send name and address on a postal card to the Secretary at Chanute.

L. WAYMAN, *Sec.*
Chanute, Neosho Co., Kans.

◆

Dampening Sections Before Bending.

Sometime ago I saw the statement in the BEE JOURNAL that one-piece sections put together with a press were much stronger than if put up by hand. I obtained a press, and found the statement to be correct; and they can be put up so much faster, too. I have a device of my own to dampen the grooves before bending the sections, and it is superior to anything I have seen or read about, yet if any one has a better way, I would be pleased to hear it. I take a board as wide as the section is long, when in the flat, raise one end of the board so as to incline it to about 25 degrees, nail a cleat on one edge for the sections to rest against, and at the lower end of the board drive two nails, for the edge of the first section to rest against; then lay the board full of sections, groove-side up, take a rag or sponge full of water and squeeze it over the grooves at the upper end of the board, and wet them all at once, then shove them into a pile with one motion, and they are ready to bend. In the first paragraph of my article on page 121, it should read *fine* colonies, instead of *5* colonies. Also, in the fifth paragraph it should read *20* instead of *16*.

E. C. EAGLESFIELD.
Berlin, Wis., Feb. 11, 1891.

[In the original "copy" of the article referred to, the figures were so indistinct as to make it a mere matter of conjecture, what they were intended for.—ED.]

◆

No Surplus Honey.

I have 100 colonies of bees. I had about that number last Spring, but did not have a swarm during the past season. I sold one or two colonies, lost one or two by robbing, and made up about the same number by nuclei, so have about what I started with last Spring, but got no surplus honey whatever, except, possibly, enough for my own family use. I fed the lightest colonies nearly up to my standard of 50 pounds of stores per colony for Winter. I have weighed my bees each Fall for the past eight years, and have never lost a colony by starvation that weighed 50 pounds in the Fall. I expect to lose a few this year in that way, for the average was a little below 50 pounds.

O. R. GOODNO.
Carson City, Mich., Jan. 11, 1891.

◆

To Connecticut Bee-Keepers.

I think that there are about 50 who keep bees in the four Western counties of this State, and some are in favor of organizing a Bee-Keepers' Association. Will all such please to write to Edward S. Andrus, Box 157, Torrington, Conn.; or Edwin E. Smith, Watertown, Conn., as soon as possible.

E. S. ANDRUS.
Torrington, Conn.

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" 100 colonies (220 pages)	1 25
" 200 colonies (420 pages)	1 50

☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

HONEY AND BEESWAX MARKET.

DETROIT, Feb. 16.—Comb Honey is selling slowly at 14@15c. Extracted, 7@8c. Beeswax in fair demand, 27@28c.
M. H. HUNT, Bell Branch, Mich.

NEW YORK, Feb. 14.—Market is very quiet, especially on comb honey. We quote: Fancy white 1-lbs., 15@16c; 2-lbs., 13@14c; off-grades, 1-lbs., 13@14c; 2-lbs., 12c; buckwheat, 1-lbs., 11@12c; 2-lbs., 10c. Extracted, basswood and white clover, 8@8½c; buckwheat, 6½@7c; California, 6¾@7¼c; Southern, 65@70c per gallon. Beeswax, 25@27c.
HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

KANSAS CITY, Feb. 14.—The demand for honey is improving; receipts and supply very light. We quote: White 1-lb. comb, 16@18c; dark, 12@14c. California white, 2-lb., 14@15c; dark, 11@12c; extracted, 6@7c. Beeswax, 22@25c.
CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CINCINNATI, Feb. 14.—Demand is good for all kinds of extracted honey, with a full supply on the market of all but Southern, which is still scarce. It brings 6@8c per pound, on arrival. Demand is fair for choice comb-honey, at 16@17c, in the jobbing way; no sale at all for dark comb honey.

Beeswax is in good demand at 24@26c., for good to choice yellow.
C. F. MUTH & SON,
Corner Freeman & Central Aves.

CHICAGO, Feb. 16.—Demand at present not very active on comb honey. Fancy white, 18c; white, 17c; white 2-lb. sections, 15c; buckwheat, 1-lb. sections, 13c; extracted, 7@9c. Beeswax, 28c.
S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, Feb. 14.—Fancy white 1-lb. comb, 18c; fair to good, 17c; dark 1-lb., 14@15c; 2-lb. white comb, 15@16c; 2-lb. dark, 13@14c; extracted, white, 7c; dark, 5@6c.
HAMBLIN & BEARSS, 514 Walnut St.

CHICAGO, Feb. 16.—The volume of trade in honey is very small. A few of the best lots are taken at 17@18c; but where the condition and appearance of honey is a little off, 16c is about the top. The supply is not large. but there seems to be about enough for the trade. Extracted, is selling at 7@8c, with fair trade.

Beeswax, 27@28c.
R. A. BURNETT, 161 S. Water St.

BOSTON, Feb. 16.—Honey is in fair demand; supply short. Fancy, 1-lb. comb, 19@20c; fair to good, 18@19c; 2-lb. sections, 16@17c. Extracted, 8@9c. There is no beeswax on hand.
BLAKE & RIPLEY, 57 Chatham Street.

ALBANY, N.Y., Feb. 14.—The honey market is quiet, with small stocks and light demand; prices steady. We are selling white at 16@18c; mixed, 14@15c; dark, 12@14c. Extracted, white, 8@9c; dark, 6@7c. Beeswax, 28@29c.
H. R. WRIGHT, 326-328 Broadway.

Bee-Keeping for Profit, by Dr. G. L. Tinker, is a new 50-page pamphlet, which details fully the author's new system of bee-management in producing comb and extracted-honey. and the construction of the hive best adapted to it—his "Nonpareil." The book can be had at this office for 25c.

Supply Dealers should write to us for wholesale terms and cut for Hastings' Perfection Feeders.

Binders made especially for the BEE JOURNAL for 1891 are now ready for delivery, at 50 cents each, including postage. Be sure to use a Binder to keep your numbers of 1890 for reference. Binders for 1890 only cost 60 cents, and it will pay you to use them, if you do not get the volumes otherwise bound.

◆

Clover Seed.—White Clover Seed has declined, and Alsike has advanced. The price of either seed will be 25 cents per pound; $2.50 per peck; and $9.00 per bushel, until further notice.

◆

Good Record.—James J. H. Gregory, & Son, Seed Growers, of Marblehead, Mass., have made the mail and express business a specialty longer than any seed firm in the United States; and to have been the original introducers of the Hubbard and Marblehead Squashes, and the various Marblehead varieties of Cabbage, beside the Deep Head and Warren the Hard Head, and All Seasons Cabbage, and also the Marblehead, Cory, and Mexican Sweet Corn, the Excelsior, Ohio, and Burbanks Potatoes, the Miller's and Phinney's Melon, the Eclipse and Crosby Beet, the Marblehead Horticultural and Marblehead Champion Pole Beans, the Canada Victor Tomato, and the Marblehead Marrowfat Pea, with a number of other vegetables now raised more or less throughout the country—is a record that should tell its own story.

◆

Supply Dealers desiring to sell our book, "Bees and Honey," should write for terms before issuing their Catalogues.

◆

☞ The 8th semi-annual meeting of the Susquehanna County Bee-Keepers' Association will be held at Montrose, Pa., on Thursday, May 7, 1891.
H. M. SEELEY, Sec., Harford, Pa.

Wants or Exchanges.

Under this heading, Notices of 5 lines, or less, will be inserted at **10 cents per line**, for each insertion, when specially ordered into this Department. If over 5 lines, the additional lines will cost 20 cents each.

WANTED.—To exchange 1-lb. thin Vandervort f'd'n for 2 of wax. Samples and testimonials free. C. W. DAYTON, Clinton, Wis.
8A10t

The "Globe" Bee Veil

Price, by Mail or Express, $1.00.

There are five cross-bars united by a rivet through their center at the top These bars are buttoned to studs on the neck-band. The bars are of best light spring steel. The neck-band is of best hard spring brass. The cover is of white bobinet with black face-piece to see through.

It is very easily put together; no trouble to put on or take off; and folds compactly in a paper box 6x7 inches, by one inch deep The protection against bees is perfect—the weight of the entire Veil being only five ounces.

☞ Discolored by Smoke. ☜

The netting of a quantity of these Veils were **soiled by smoke.** These complete Veils we offer, postpaid, at **60 cents each, two for $1.10,** or **four Veils for $2.00.** They are practically just as good as ever, but slightly soiled To secure these, **Order at once.**

THOS. G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

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JUST PUBLISHED—ENTIRELY NEW.

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INTERNATIONAL
DICTIONARY

The Authentic "Unabridged," comprising the issues of 1864, '79 and '84, copyrighted property of the undersigned, is now **Thoroughly Revised and Enlarged,** and bears the name of

Webster's International Dictionary.

Editorial work upon this revision has been in progress for over **10 Years.**

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Crude and Refined. We have constantly in stock, large quantities of beeswax, and supply the prominent manufacturers of **COMB-FOUNDATION** throughout the country.

We guarantee every pound of Beeswax purchased from us absolutely pure. Write for our prices, stating quantity wanted.

ECKERMANN & WILL,

Bleachers, Refiners and Importers of Beeswax,

8E13t *SYRACUSE, N. Y.*

LOOK! ORDER QUICK

If you want some of those 5-banded Italians, gentlest, best workers, most beautiful Bees known; took first premium at the Ills. State Fair in 1890. Warranted Queen, $1.25; tested, $2.00; selected tested, $3.00, before June 1; lower after; order now; pay when Queens are ready. Langstroth or Simplicity Brood Combs wanted in exchange at 8 cts. each. **No Foul-Brood.** Good reference given.

S. F. & I. TREGO, Swedona, Mercer Co., Ills.
1D26t

Mention the American Bee Journal.

$100.00
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ONION

THE universal favor accorded TILLINGHAST'S PUGET SOUND **Cabbage** SEEDS leads me to offer a **P. S.** GROWN **Onion,** *the finest Yellow Globe in existence.* To introduce it and show its capabilities I will pay $100 for the best yield obtained from 1 ounce of seed which I will mail for 80 cts. **Catalogue free.**

Isaac F. Tillinghast,
La Plume, Pa.

8A3t 3M5t

WHEN ANSWERING THIS ADVERTISEMENT, MENTION THIS JOURNAL.

1891. IF YOU WANT 1891.

BEE-SUPPLIES.

Send for my Illustrated Price-List. **Quinby Smokers** a specialty; all sizes kept in stock; also all kinds of Foundation. Dealers should send for wholesale list of Smokers.

W. E. CLARK,

8A24t ORISKANY, Oneida County, N. Y.

Mention the American Bee Journal.

UNITY A RELIGIOUS WEEKLY

Rational Yet Reverent. For those who believe in Religion, but question miracles, and everlasting punishment, and fail to see the justice in schemes of vicarious atonement. UNITY stands for a Religion that is rational and a rationalism that is religious, and for a religious fellowship that welcomes all who wish to work together for the advancement of Truth, Right and Love in the world. 32 columns, including a sermon every week. $1.00 a year, but to a new subscriber, mentioning this advertisement, it will be sent a whole year for 50 cents. **CHARLES H. KERR & CO., Pubs., 175 Dearborn St., Chicago.**

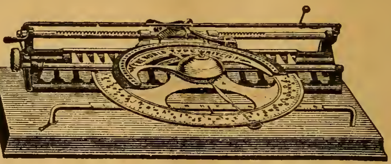
8A4t

BEES Always Profitable by the Double Hive, Non-Swarming System. Simple, Practical. Full description, post-paid, 25 cents.

8A9t GEO. A. STOCKWELL, Providence, R.I.

Mention the American Bee Journal.

The World Type-Writer.



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POPE MANUFACTURING COMPANY

OF BOSTON.

THE above Typewriter will be sent by express on receipt of **$15.00.** Or we will furnish one to any one sending us a Club of 100 subscribers to the ILLUSTRATED HOME JOURNAL at 50 cents each, or 50 subscribers to the AMERICAN BEE JOURNAL at $1.00 each; or the Club may consist of subscriptions to both Journals, counting two for the ILLUSTRATED HOME JOURNAL as equal to one for the AMERICAN BEE JOURNAL.

This Machine has a full set of Capitals and small letters, together with figures and characters. It is complete in every sense, and does its work as well as a $100.00 Machine.

A book of testimonials, from prominent men all over the United States, will be cheerfully furnished on application.

The popularity of the use of Typewriters for business correspondence is unquestioned, as it is much easier and plainer to read than the handwriting of the majority of people of all classes, and the use of it is an indication that the writer is up with the times.

We have one in use in our Office, and can reply to all inquiries on a World Type-Writer, showing a sample of its work.

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Now making Car-loads of **Dovetailed HIVES,** Langstroth-Simplicity Hives, Plain Langstroth Hives, Alternating Hives, Chaff-Hives, Sections, and many articles not made by others. We can furnish, at wholesale or retail, everything of practical construction needed in the Apiary, and at LOWEST PRICES. Satisfaction guaranteed. Send for our New Catalogue, 51 Illustrated pages, free to all.

E. KRETCHMER, Red Oak, Iowa.

8Etf

Mention the American Bee Journal.

WANTED!

A PERSON OF MEANS to establish an Apiary, Small Fruit and Poultry Farm, by a handy man that has some experience at the business; or to work for some one that needs help, in shop or out. (Single man.)

Address, **J. W. TEFFT,**
318 Swan Street, - BUFFALO, N. Y.
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Mention the American Bee Journal

THE AMERICAN BEE JOURNAL
CIRCULATES
ALL OVER THE WORLD.
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVII. Feb. 26, 1891. No. 9.

Editorial Buzzings.

Better to stem with heart and hand
The roaring tide of life, than lie
Unmindful, on its flowery strand,
Of God's occasions drifting by.

◆

Prof. A. J. Cook, we are sorry to learn, is "on the sick-list" from overwork, and a strain upon the nervous system.

◆

A Quarterly of 4 pages, entitled "The Queen Bee," is published by E. L. Pratt, Beverly, Mass., at 10 cents a year.

◆

Springfield has a majority vote for the State Convention. Now let all who can go to Springfield on Feb. 26, and help to organize the State Association. We expect to be there, if nothing unforseen happens to prevent it.

◆

The Third Annual International Fair will be held at Detroit, Mich., Aug. 25 to Sept. 4, 1891. Further particulars may be obtained of Geo. M. Savage, Secretary, 7 Merrill Block, Detroit, Mich.

◆

Several have asked for instructions how to proceed to get up local associations. We refer all such to our reply to P. E. Vandenburg, on page 248.

◆

La Grippe is now prevalent in Japan, and has made the circuit of the world. It has spared no class, from the Emperor in his palace to the poor peasant. It has developed other diseases, and together its victims have numbered many thousands. Its subsequent attacks are often repeated, and, taken all in all, it is a disease much to be dreaded.

◆

We Congratulate Dr. A. B. Mason upon his appointment as Postmaster at Auburndale, O. He will be an efficient officer for "Uncle Sam," and he will be a popular one with the public, for he is bubbling over with "good nature"—and will be civil, accommodating, and obliging—qualities which too often are absent in Postmasters and postal clerks.

◆

The New Onion Culture, is the title of a new pamphlet by T. Greiner, of La Salle, N. Y. It is a "story for young and old," which tells how to grow 2,000 bushels of fine bulbs on one acre, and fully explains the new system. It contains 64 pages, and is nicely printed and illustrated.

◆

☞ A long article on Honey Adulteration from Harmon Smith, is on file, and may be expected as soon as we can find room for it in the BEE JOURNAL.

◆

Very Neat and Attractive.—Mr. S. D. Haskin, of Waterville, Minn., has sent us a small sample cake of beeswax ready for household purposes. It was cast in a small pattie-pan, and is somewhat of the shape of the pearl oyster shell; the top has a loop of tape (the ends being fastened in the wax while melted) to hang it upon a nail, and thus be in place when wanted. These little cakes are intended for the retail trade, of course, and will be quite "taking." It is in our Museum.

A Cheap Feeder has been put upon the market by Mr. A. G. Hill, and as the time will soon be here for Spring feeding, many feeders will be needed, if the weather is unpropitious, and the bees cannot obtain honey from the fruit bloom. Mr. Hill says:

A good bee-feeder is of the greatest importance, and should embody all the following advantages:

1. It should be convenient to fill.

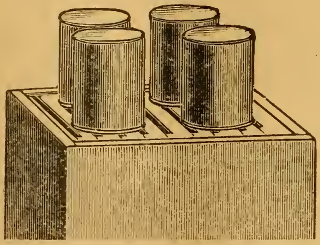
2. It should be constructed so as *not* to drown or daub the bees.

3. It should be so arranged that the bees can take the food without leaving the combs or cluster.

4. The capacity should be enough to furnish from 1 to 15 pounds at a single feeding.

5. It should be convenient to handle and refill, that this disagreeable task may be accomplished as speedily as possible.

All these particulars are embodied in the Atmospheric Bee-Feeder. After it is filled (from a faucet in a large can, which holds the syrup, or with a dipper), the cover is put on, and the feeders are inverted on the frames over the bees, as shown above.



HILL'S ATMOSPHERIC BEE-FEEDER.

They hold a quart, and cost only 15 cents; or can be mailed for 6 cents extra. Per dozen, $1.60. They may be obtained at this office.

◆

A "Bread and Butter Series" of pamphlets is being issued by George A. Stockwell, of Providence, R. I., at 25 cents each. No. 2 is on "Apiculture; and the Double-Hive Non-Swarming System." Others in the series are to be devoted to the Farm, Horses, Poultry, Pigeons, Canaries, Vegetables, etc.

The Illinois State Convention seems to elicit but little interest, especially as to its location. Dr. Miller asked those who would attend a State Convention to write to the BEE JOURNAL and state their preferences. So far, all the answers received are these:

For Springfield—William Yocom, D. D. Cooper, W. H. Cook, C. E. Yocom, Mrs. L. Harrison, Geo. F. Robbins, J. S. Hughes.

For Chicago—E. P. Gibbs, Aaron Coppin, L. Highbarger, A. Y. Baldwin.

C. P. Dadant writes thus: "You may count on my presence, at either Chicago or Springfield. If there are no reduced rates to either place, I would prefer Springfield."

J. S. Hughes writes thus: "I give up Decatur and vote for Springfield, April 10. Our representative has just assured me that it will be useless to expect any legislative action before the election of a United States Senator has been accomplished, and the Legislature settles down to business. He says they will not adjourn before June 1."

Mrs. L. Harrison writes: "Providence permitting, I will attend a State Convention at Springfield, on Feb. 26. If the meeting is held anywhere else, then some of the 'boys' will have to go to Springfield, to interview the legislators. Thos. G. Newman, Dr. Miller, C. P. Dadant, or some others, will have to make the trip. In my opinion, it will save time, travel and expense, and do more effective work, to meet at the capital. I have friends at Chicago, whom I would dearly love to see, but none at Springfield; yet I believe that our interests demand that we meet at the capital of the State."

The preference is, therefore, decidedly in favor of Springfield, where the Convention will meet this week. We intend to be present and aid in the organization, and expect to present the decisions arrived at, and the work accomplished, in our next issue.

Our personal preferences are in favor of Chicago, but as the larger number are in favor of Springfield, we cheerfully give in to the majority. In order not to influence the location, we did not state our preference, and we shall now work for its prosperity, just as if it had been located in the place of our choice.

Mr. J. H. Larrabee, the late Secretary of the Vermont Bee-Keepers' Association, has been induced to come to the Michigan Agricultural College, to assist Prof. Cook in making experiments in apiculture. The Professor gives the following in the *Review*, concerning the work to be done:

Not long since, Dr. C. V. Riley visited our college, and wished to know if I would give attention and care to experiments in bee-keeping, in case the Department would furnish a good assistant to care for and manage details. I said I would do all I could to make such experiments successful. In discussing the matter, Dr. Riley and I thought best to press the work of special planting for honey, that it might soon be decided whether it would ever pay or not. It was also thought wise to take every care and pains to breed up a superior variety or strain. It is also proposed to try experiments to find all the factors that enter into the matter of ill-success in wintering. Other experiments will be conducted, but the above will receive the emphasis of our care and effort.

In making inquiries, I was led to decide upon Mr. J. H. Larrabee, Secretary of the Vermont State Association, to assist in this work. Mr. Larrabee is very intelligent; a hard worker; neat and methodical in his work; has proven his ability by that best of tests, real success; and is of that judicial turn of mind that can carry on an experiment and give results—the real facts—without prejudice or bias. At least I was led to that belief, after many inquiries; and now that Mr. Larrabee is with me, and I have become acquainted with him, I am more assured that I made no mistake in deciding upon him to assist in this important work.

Let me add that we shall be very glad, at any time, to receive suggestions from bee-keepers, either as to ways to conduct these experiments, or regarding other experiments that it may be thought wise to prosecute.

☞ Every Grand Army man will be delighted with the beautiful colored lithograph that appears in this week's issue of "Judge." It is the most living likeness of Gen. Sherman that has yet appeared.

Clubs of 5 New Subscriptions for $4.00, to any addresses. Ten for $7.50.

Prohibiting the Bees.—F. M. Hart, of Traver, Calif., writes thus:

Mr. W. Ogden is harping at the bees again. I notice the following in the Viralio *Delta*:

"The fruit-growers' petition to the Supervisors, to pass an ordinance prohibiting the keeping of bees in any great numbers, has 77 tax-payers' names signed to it, up to date. It has been in Grangeville for the past three weeks, but Mr. Ogden removed it to Hanford, last Saturday, to give the growers in that vicinity a chance at the bees."

By this it seems that he intends to send his petition to the Board of Supervisors, instead of the Legislature, as I wrote you lately. F. M. Hart.

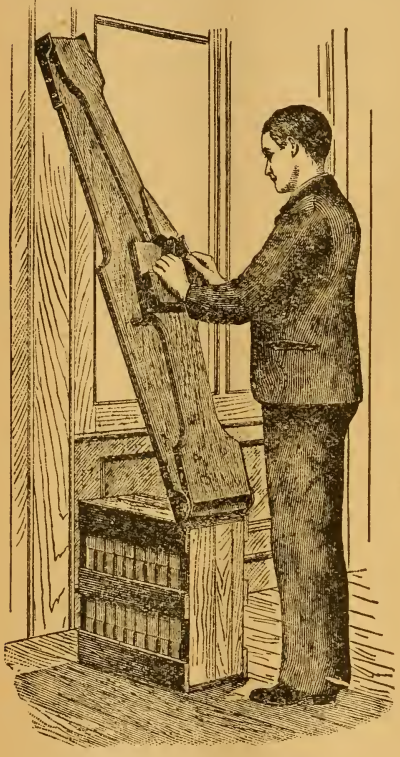
Mr. Hart is a member of the National Bee-Keepers' Union, and has been instructed how to proceed. Meanwhile Mr. Ogden has full swing to do as he pleases with his petition. When the time for action comes, he may go home with a "flea in his ear."

Now it is Dr. A. B. Mason that is having *la grippe*. He writes that he has a sort of "influenza which makes me very weak." That "League Convention and Banquet," together with the Bee-Keepers' Convention, must have over-worked the "big doctor," and this is the result. But, then, he enjoys lots of work. Here is what he writes about his guests:

We had a good Bee-Convention; there were over 50 bee-keepers present. On Tuesday night we had at our house, as guests, Mr. and Mrs. J. B. Haines, of Bedford; Ernest R. Root and Mr. Calvert, of Medina; W. Z. Hutchinson, of Flint; and Mr. E. E. Hasty. If we did not have "a right royal time," it was not our fault. There were eleven at our table at breakfast on Wednesday morning.

Binders made especially for the Bee Journal for 1891 are now ready for delivery, at 50 cents each, including postage. Be sure to use a Binder to keep your numbers of 1890 for reference. Binders for 1890 only cost 60 cents, and it will pay you to use them, if you do not get the volumes otherwise bound.

The Latest Arrival in our Museum is the Hubbard Section-Press, for rapidly putting one-piece sections together. The engraving gives a good idea of it. It does its work very satisfactorily. It was invented by Mr. G. K. Hubbard, of Fort Wayne, Ind., over a year ago, and is capable of putting together a thousand sections in an hour. The work is not only done rapidly, but firmly and accurately. The method of doing so is thus described by Mr. Hubbard:


THE HUBBARD SECTION-PRESS.

To put a section together, bend it around until the dovetailing is nearly together, as shown in the engraving, at the same time placing it in the machine; and when so placed that the dovetailed ends will correspond, a slight push forward will effectually do the work. The two movable arms work as a toggle-joint, giving great pressure at the dovetailed corner.

It is nicely made and finished, and a point in its favor is that both hands can be used to handle the sections, and at the same time, also to work the press. When it came, one of our employes, who had a lot of sections to put together, put it into use, and in five minutes was able to handle it very rapidly; the sections coming out true and square every time.

The Programme of the Sanilac, Tuscola and Huron Counties (Mich.) Bee-Keepers' Association is on our desk. The meeting will be held at the Court Room, Caro, on March 11 and 12, 1891, at 1:30 p.m. Essays are announced, as follows:

Transferring Bees—J. S. Kitchen.
Comb Foundation, and its Use—N. Van Patten.
Spring Dwindling — Informal discussion.
Varieties of Bees—W. Z. Hutchinson.
Production of Comb-Honey—Jno. Deitz.
Is Bee-Keeping Profitable to Farmers—Discussion led by E. A. Palmer.

Programmes can be obtained of the Secretary, J. G. Kundinger, Kilmanagh, Mich.

Missouri Statistics.—The Secretary of the Missouri State Bee-Keepers' Association furnishes the following statistics for 1890:

Number of bee-keepers reporting, 142. Number of colonies—Spring, 5,560; Fall, 6,610. Pounds of honey—comb, 77,903; extracted, 88,202. Pounds of beeswax, 979. Twenty bee-keepers, with 450 colonies, make no report on honey. Largest number of colonies reported by one person: Spring, 550; Fall, 900. Smallest number: Spring, 3; Fall, 4. Average number of pounds of honey per colony reported, 29.85. Season generally, very poor for honey. Apiarists who have their bees in modern frame hives, report them in fair condition. Many of the bees in old box-hives will die before Spring.

J. W. Rouse, *Sec.*
Mexico, Mo., Feb. 9, 1891.

Welcome.—Please permit me to extend my endorsement of the "Illustrated Home Journal," and may prosperity crown your efforts. It is a welcome periodical in my household, and its contents are devoured with much pleasure.

Chicago, Ills. M. H. Mandelbaum.

Prospects for the Next Season.—The number of supply dealers this year, is larger than ever, if we may judge by the number of catalogues received. The editor of *Gleanings* remarks thus on the situation, after premising that the indications point to an extra good season this year:

> We have never before had such a run for machinery. Our machine shop is having a big rush; and it is somewhat behind in consequence.
>
> This does not necessarily signify that competition is going to be any stronger on account of new supply dealers, or the increased facilities of old ones, but that the bee-keeping industry is growing and spreading, the world over. We wish all every measure of success.

We have a *big* country, or, if you please, a big world, and there is *plenty* of room for all, even for the bee-periodicals, though the rule of "the survival of the fittest" will rather crowd some of them before the year is up, we fear.

Competition! so much the merrier. We shall get better supplies and better periodicals; in fact, they begin to sparkle already, in their new dresses and innovations.

Catalogues and Price-Lists for 1891 have been received from

J. W. Rouse & Co., Mexico, Mo.—20 pages—Bee-Hives and Supplies.

F. N. Johnson, Knoxville, Ills.—1 page—Bees.

C. W. Costellow, Waterboro, Maine—16 pages—Hives and Apiarian Supplies.

S. Valentine, Hagerstown, Md.—16 pages—Albino and Italian Queens, Bees and Supplies.

J. F. Michael, German, O.—16 pages—Bees and Supplies.

Levering Bros., Wiota, Iowa—28 pages—Bee-Keepers' Supplies.

John Nebel & Son, High Hill, Mo.—20 pages—Italian Bees and Queens.

A. L. Kildow, Sheffield, Ills.—16 pages—Bees and Queens.

G. D. Black & Bro., Independence, Iowa—24 pages—Garden Seeds.

F. W. Lamm, Somerville, O.—16 pages—Bees and Supplies.

Bittenbender & Jordan, Knoxville, Iowa—44 pages—Monthly Calendar for Bee-Keepers' and Apiarian Supplies.

Wavelets of News.

Bees Visiting Different Flowers.

"Bees visit only one kind of flower on the same trip." That is old but not always true. When forage is plentiful it may be true; but when scarce, they will change from one kind to another several times on the same trip. I have seen them do it.—DR. C. C. MILLER, in *Gleanings*.

"Do Bees Eat Eggs?"

That is the question up now, and I hope we will learn when they do, and when they do not. I know I have had bees starve to death, leaving eggs in the hive; and I know if I remove a queen from a hive, I expect nearly all the eggs to disappear within 24 hours.—DR. C. C. MILLER, in *Gleanings*.

The Weather in England and Spain.

We notice by the *British Bee Journal*, that they are having unusually severe weather.

They have had it as low as 27° below the freezing-point, or, as we would term it in this country, 5° above zero. In the south and southeast of England they have had 60 days of frost, and during the whole of that time, in many parts of the kingdom, the bees have never seen the outside of their hives.

This is not an unusual thing for the United States—at least the northern part of it; but when bee-keepers are prepared for a warmer climate, it makes the prospects for successful wintering rather dubious in England.

But if such weather has prevailed in the latitude of London (5½°), which is considerably north of the United States, the unusual severity of last month is realized when we read in friend Andreu's Spanish bee-periodical of the unusual prevalence of snow storms, cyclones, and zero weather in the south of "Spain, sunny Spain." The orange trees and kindred semi-tropical fruits are all killed. Wolves have roamed the villages, and even destroyed human life, as we learn from other sources. Friend Andreu asks, philosophically, "Is it possible for us to struggle against the north pole?"—*Gleanings*.

Supply Dealers desiring to sell our book, "Bees and Honey," should write for terms before issuing their Catalogues.

Queries and Replies.

Opening the Hives Before Spring.

QUERY 754.—1. Is it detrimental to open the hives and examine the bees before the Spring honey-flow? 2. At what time in the Spring would it be best to make such examination?—Mich.

No. Any warm day when the bees can fly.—J. P. H. BROWN.

1. Yes. 2. We examine our bees every fortnight, from March to June.—DADANT & SON.

No; not if proper care is used. It all depends on locality and circumstances. —H. D. CUTTING.

1. No, not if the weather is warm. 2. Any warm, pleasant day in early Spring. —MRS. L. HARRISON.

1. Not in suitable weather. 2. When the weather is so warm that the bees fly freely.—R. L. TAYLOR.

Not if the weather is warm. In cool weather the bees will sometimes ball and kill their queen.—M. MAHIN.

1. No. 2. Any time when the bees can fly, and you can do it and not incite the bees to robbing.—JAMES HEDDON.

1. No. 2. Whenever the weather is warm enough for the bees to fly. They should not be disturbed at any other time.—G. L. TINKER.

1. No, not in the least. 2. Any warm day. I often examine them while in the cellar. It does them no harm if carefully done.—A. J. COOK.

I make examinations in early Spring; as soon as the bees can fly with safety. I consider this the correct thing to do in order to get matters in shape for the season.—J. E. POND.

1. It is owing to how you do your work; too much "monkeying" would be injurious. 2. Any time when the temperature is right, but watch out for robbers. —J. M. HAMBAUGH.

1. I do not think it is well to fool with them unnecessarily, but it will do no harm to open the hive on a day warm enough for them to fly well, if you do not start robbing.—C. C. MILLER.

1. Not if the weather is suitable. 2. As soon as the temperature is sufficiently high to do it without chilling the brood, so as to see that they are in good condition, and have plenty of stores.—A. B. MASON.

1. Never open a hive at any time unless there is something to be gained by so doing. 2. If there is something to be gained, open the hive at any time when it is warm enough for the bees to fly.—G. M. DOOLITTLE.

1. No; open the hives at any time the weather is warm enough, and there is any object for opening them. Always be careful not to start the bees to robbing when no honey is to be had in the fields. 2. During fruit bloom.—C. H. DIBBERN.

1. It is better not to open hives for examination unless the weather is warm, regardless of the honey-flow. 2. Any day when the weather is warm enough so that the brood will not be chilled. But, really, little examination is necessary. If they have honey enough and a queen, you do not need to fuss with them.—EUGENE SECOR.

No, not if the bee-keeper has experience enough to know how and when to handle his bees. If you will watch the weather and your bees, you can tell when you can safely handle them. 2. No certain date can be fixed in any locality as a proper time to open hives and examine bees. Any warm day in the Spring, when the bees are gathering pollen rapidly, they can be handled without any danger. Bees will sometimes ball and kill their queen if the hive is opened in the early Spring, when the weather is bad, and the bees are discouraged and fretful, because they have nothing to do.—G. W. DEMAREE.

When an examination is necessary, it can be made at any time when the weather is warm in the Spring.—THE EDITOR.

◆

We Club the American Bee Journal and the Illustrated Home Journal, one year for $1.35. Both of these and Gleanings in Bee Culture, for one year, for $2.15.

◆

New Music.—From the White-Smith Music Company we have some gems of new songs: "Babylon," by Watson (50 cents); "Ferdinand John," by Paul Rodney Bitte, German and English words, by Bohn (25 cents); "In Sweet September," by Temple (35 cents).

Above all Shines the Sun.

There are blossoming meads, where the soft winds sweep,
And the dews of the twilight fall,
Where the odorous flowers, in their hearts so deep,
Hide their honey cups, that the Summer steeps,
For the sunlight falls over all.

There are caverns dark, where the death-damps cling,
Where weird, and gaunt, and tall,
The specters of gloom, gray phantoms bring,
And the hollow arches with wailings ring,
Yet the great sun hangs over all.

There are human lives like a placid stream,
That never a pain recall ;
But rest in the joy of the heavenly beam,
And in blessed content live their happy dream,
In the sunlight's radiant fall.

There are lonely graves where the ivies creep
To shroud with a tender pall ;
There are hearts that moan, there are hearts that weep ;
There are hearts that the vigil of death must keep,
But the sunlight falls over all.

—MAUDE MEREDITH.

Topics of Interest.

Some Advice to Beginners.

JAMES HEDDON.

While this heading has been used very many times over the top of articles upon the subject, I believe I have never before made use of it. But this morning, as I was looking over the AMERICAN BEE JOURNAL for January, 1891, it came into my mind more forcibly than ever, what a mystification must be thrown around the beginner in bee-keeping who has as yet acquired but little knowledge of the business. I am not old enough to remember the time when our agricultural, horticultural and apicultural literature has not been infested with pseudo-scientists, or those who, having very little practical experience, yet with a good education—or more than that, a great flow of ink and a desire to be heard—wrote long, labored articles upon subjects of which they had almost no practical knowledge.

The questions ever present in the mind of the beginner, are, "Whom shall I follow? Whose advice shall I take? Whose implements shall I use?" No wonder he feels confused, and is in doubt which way to turn. Being a good reasoner on all subjects in which he is versed, he knows that his decision is liable to be a jump in the dark. The object of this article is to point out a few guide-boards, which answer the above questions, at the same time, if possible, giving good reasons for the advice I shall offer.

Brown will make a claim, with all the assurance in the world. Smith will make another, with equal assurance and exactly reverse statements. Now, which shall the beginner follow? I would ask the reader if he has not noticed that certain authors write with much assumed authority? Certainly, he will answer "Yes." A certain class may well assume authority, but is it not true that certain writers, who indulge radically in such assumption, have no right to do so? Does it not hold to reason, in this practical age of the world, that a good adviser should be a practical success in the line of business upon which he assumes to give advice? Brown uses a certain hive. Brown claims, and probably thinks, that it is best. He is prejudiced in favor of a certain honey-extractor. He advocates a particular bee-feeder, a certain method of transferring, in contracting or not contracting of brood-chambers during the honey harvest, as the case may be, etc.

Now, let the beginner ask the following questions: "While Brown may be a successful writer, is he a successful honey-producer?" "How many pounds of honey does he produce annually?" "Where does he market it?" If he is claiming a short-cut method, by which 2 or 3 colonies of bees can be worked with the same labor and time that has usually been devoted to one, does he keep large numbers of colonies?

"Necessity is the mother of invention," and I would sooner bank upon the large bee-keeper, regarding short-cut methods, than upon one who keeps fewer bees. I know that large apiaries lead to the invention of short-cut methods. Another pertinent question for the beginner to ask is, how many converts has Brown, or Smith, or Jones, to his special implements and methods? But more than that, who are these converts? Are they practical, successful honey-producers, or are they the comparatively unknown John Fikes, Billy Tubbs and Dave Larkin?

The above, and other questions, are among the ways that the expert man of natural tact, has of becoming familiar with the best methods and implements in any line of business of which he has little or no practical knowledge.

Dowagiac, Mich.

New York State Bee-Keepers' Convention

GEO. H. KNICKERBOCKER.

EVENING SESSION—JAN. 22, 1891.

The Convention was called to order at 7:30 p.m., with Vice-President I. L. Scofield in the chair.

The proper thickness of comb foundation, and is it advisable to use full sheets or starters in brood-frames, was first discussed.

E. R. Root said it was a good deal according to people's notion; some think they are sure of getting more honey by using full sheets of foundation, and others are equally sure that there is a loss of wax, as the wax scales will be secreted anyway.

N. D. West—Use both full sheets and starters; it depends upon circumstances and conditions. The bee-keeper must watch these, and decide for himself which is best.

Abram Armhurst—I think it is best to use a medium foundation, and not fill the frames too full, so if it sags a little it will not touch the bottom-bar.

N. D. West—If I was going to increase from 50 to 75 per cent., I would use but little foundation, but with little or no increase, I would use full sheets. For hiving new swarms, I would use 5 frames, with starters, and box at once. By the time those 5 frames are filled with brood and honey, the swarming season is past, and when you add more frames, use full sheets of foundation. If the queen is a good one, she will deposit eggs as fast as the bees build the comb. I prefer to have them work slowly in the combs below, as then the bees will carry on work above and below at the same time. If the swarm is early, spread the frames when the 5 are full, and put empty combs or full sheets of foundation in the center.

J. H. M. Cook—I find that in my locality it is advisable to use full sheets.

E. R. Root—My father made some experiments a few years ago to determine how much the bees added to the foundation, and ascertained that when a sheet was drawn out brood depth (⅞ of an inch), it was about 25 per cent. heavier than the sheet of foundation.

W. E. Clark—I use as thin foundation as I can make for surplus boxes, and the thinner I can make it the better I like it. I think a great deal depends upon what the foundation is made of, about the combs being wavy. I would not, by any means, use starters in brood-frames unless you are in a locality where there is a good flow of Fall honey.

Chas. Stewart—My experience is very much the same as Mr. Clark's. I used starters one year (they were about ⅓ the depth of the frames), and the bees did nicely in the boxes, but when it came time to put them in shape for Winter, I found that they had but little to winter on. Their combs were built but little farther down than the starters of foundation.

Thos. Pierce—I am a friend of wired frames and full sheets of foundation. My frames are 10x15 inches inside. I use 6 wires up and down, and do not have any crooked combs.

G. H. Ashby—I have but one wired frame that I know of, but I have a very fine lot of combs. When your bees are building comb, or drawing out foundation, be sure that your hive is level from side to side—if it pitches a little to the front, it will do no harm.

Chas. Stewart—I use the Quinby frame, and have never used wired foundation, or wired my frames. Have moved my bees, and have had but few combs break down.

N. D. West—There is one point about using foundation that has not been mentioned. It is always best to get the queen to occupy the foundation the first season. If not occupied then, the following season, early in the Spring, the cluster of bees will be divided about the same as if there was a board in the hive.

J. Van Deusen—Use wired foundation. It is better, and much cheaper than to bother to wire frames.

I. L. Scofield—A year ago last Fall I shipped 20 colonies of bees to Jamaica. I selected all wired frames, and after they arrived, the man wrote that many of them were well filled with brood, and that not one was cracked or broken.

J. Van Deusen—I shear the wax from the wire with a wooden shear that bends them at right angles. Place your foundation in the frame, and then run some hot glue along the edge, at the same time covering the ends of the wires. It is done very quickly and nicely. I use nothing but wax for sections, and glue for frames.

W. L. Coggshall—I use wired frames. I have a board that will hold 3 or 4 frames, and after the wire is pressed into the foundation, I take an iron spoon that is bent up very small, so that the wax will run slowly, and fasten the sheet to the top-bar and one end-bar with ¼ rosin and ¾ wax.

H. R. Wright—In shipping, what makes some comb-honey fall out so badly, and other lots come in good shape? Is it the method of fastening?

G. H. Ashby—It all depends upon the honey flow. If honey is coming in rapidly, they will fill the section all around—top, bottom, and sides—and there will be no danger of its being broken out, if properly handled; but in poor seasons they are sometimes only fastened to the top.

W. E. Clark—I once used three-cornered pieces of foundation in the clamps, alternately with full sheets, and the boxes with full sheets were full of honey while the most of those with starters were only partially full. This was in a poor season, but if it pays in a poor season, will it not pay every time?

I. L. Scofield—In cutting foundation for sections, I have a board with saw-kerfs just the right distance apart to cut a sheet the full size of the section. I prefer to use full sheets, especially during the last 3 or 4 poor seasons.

W. F. Marks then offered the following resolution:

Whereas, The New York State Agricultural Society has secured a permanent location, and erected substantial buildings for nearly every industry and pursuit; and

Whereas, The bee-keepers of the State of New York deem it necessary and proper that that society should provide convenient and suitable quarters for the exhibition of bees and honey, as has been done by other States. We also believe that we are entitled to a special superintendent for our department; therefore,

Resolved, That the President of this Association appoint a committee of three to wait upon the Executive Board of the New York State Agricultural Society at their next or subsequent meeting, and press our claims. Carried.

The Convention then adjourned until to-morrow morning.

Nectar Secretion—Some Old Honey.

R. C. AIKIN.

Have just re-read Prof. Cook's remarks on page 777, and J. Bull's on page 810, 1890, also, what Rambler says on page 115, in regard to the secretion of nectar, and I will add some experience and observations.

My experience was in Southwestern Iowa. First, I will speak of a certain wet season; one of those seasons when every little cloud that came along seemed to give us a thunder shower.

That is the country where corn grows, but that season more heart's-ease than corn grew; the ground being too wet all the time for cultivation. The heart's-ease being an annual, sprang from the seed, and grew unchecked, a healthy vigorous growth until seed time. When at its prime, it yielded almost continually, and seemed just as good after as before a shower. We had bright, warm sunshine between showers, and the result was a good crop of honey exclusively from that plant.

Seasons following I practiced keeping a colony on scales, making a record, only weighing each evening at dusk, and I frequently found some of the highest gains on the first and second days preceding a thunder storm. If the storm was local, usually but little interruption of the flow occurred. If, however, the storm was general, and especially if followed by a stiff, cool breeze from the northwest—such as often occurs in that country after a general storm—very little honey would be gathered for the next two to four days.

I think Prof. Cook is on the right track. Warmth and moisture will not cause a secretion of nectar, unless we have good, healthy plants to secrete it. The heart's-ease and Spanish-needle are plants that thrive well in rich, moist soil, and will usually secrete well in quite wet weather; the heart's-ease requiring, perhaps, the most heat of the two. I have had good yields from Spanish-needle when the weather was so cool that the bees could only work about one-half or two-thirds of the time.

Unhealthy plants, and plants growing out of their season, or under conditions not peculiar to their nature, cannot be depended on for honey. As Prof. Cook says, "You cannot make the best animal out of a calf or colt partially starved;" neither can we get a good secretion of nectar, or a good yield of seed, from plants that have not been favored with those conditions best suited to their growth and development.

SOME OLD HONEY.

The season of 1884 was a failure in Southwestern Iowa, and I reported the fact at the time in the Bee Journal. Shortly after my letter appeared, Mr. H. M. Noble, of Swedesburgh, Iowa, sent me a pint bottle of white clover honey. I placed the bottle in the honey house at the time, and have kept it ever since.

In the course of a few months the honey candied and remained so for perhaps a year, more or less. Later, the room had a stove in it, and at times was quite warm, but at no time was heat applied directly to the honey. The honey finally again became liquid, except a very small portion, and for three years or more has changed but little. At present about one-third at the bottom is candied, while the remainder is liquid, and is transparent, but has a slight reddish-amber color. The flavor is quite pleasant. Part of the time the bottle has been corked, and part of the time open.

Fort Collins, Colo.

Feed the Bees, if Necessary.

C. S. MILLER.

Do not let the bees starve to death when a few pounds of candy will take them through the cold winter all right. More than half of the losses, in ordinary years, are the result of starvation.

Besides the ones that lick the combs dry, a great many colonies die with enough honey to feed them for a month still in the hive, from having too many combs that are cold, because of not being covered, and the sleepy bees will not move to them.

Even in the cellar, they may be fed if it is done in the right way. We feed them at any time during winter, being careful not to "stir them up."

For candy, take granulated sugar, and add just water enough to wet it, then melt it over a slow fire, being careful to keep the blaze from the pan, or it may scorch, then it will poison the bees.

When it boils enough so it will harden into candy, when stirred in a saucer, take it from the fire, and stir until quite thick.

Have a white cloth spread on the table, and pour the candy on it to cool. When cold, the cloth will strip loose from it, then it can be broken into small pieces for use.

On lifting the mat from the hive, if the bees "rise up," just leave them uncovered for awhile, when they will all settle down. Lay the candy on the bars directly over them, and cover again with a cushion.

Bees in the open air should not be disturbed, except on days when they can fly out, unless they are starving.

If a cellar is too damp, a bushel of unslaked lime is the best remedy, unless the water stands on the bottom of cellar; then, a drain and more warmth are needed.

Do not use smoke in cold weather, for if bees are frightened, they will eat too much.

Bradford, Pa.

Rousing Colonies for the Honey Harvest.

C. W. DAYTON.

In *Gleanings* for Feb. 1, at the top of page 88, it says: "The tendency of the times is against contraction to less than 8 Langstroth frames. It is far better to have a big, rousing colony on 8 frames, than a medium one on 4 to 6 frames."

May I suggest that if it is not satisfactory to have a medium colony on 4 to 6 frames, how would it do to have as much of a big, rousing colony as can be gotten upon the 4 or 6 frames, and the remainder in the sections?

Some may be led into the belief that the object of contraction is to maintain a medium colony, and avoid a big, rousing one, which is not the case.

Those bee-keepers who apply systematic methods of contraction, are, I will venture to say, champions when it comes to the question of big, rousing colonies, and by the aid of contraction they come out still farther ahead in the amount of honey obtained.

In the first place, one should know that contraction is a fallacy with *any* but a big, rousing colony.

I presume that I am the most radical advocate of bee-hive contraction, because I often contract the brood-nest, during the honey flow, down to a single brood-frame; yet, notwithstanding this, I use a 12-frame hive and try to get all of the frames full of brood by the time the honey harvest begins.

If a single queen cannot get a big, rousing colony on the 12 combs by the time I want them, they are doubled up until they do become rousers.

Rousing colonies and contraction are very closely related. It may be compared to a bellows—it cannot be contracted until it has first been expanded.

Last season, our honey harvest began on June 25, and lasted until July 5. I contracted most of the strongest colonies between June 18 and 23. These colonies had from 7 to 10 combs of brood each, averaging about 8. Of the 12 combs my hives would hold, I took out 4 and put in their places 3 wide frames of sections, which were sandwiched in with the brood-frames.

When any colony had 12 frames of brood, I put an upper story on the hive and removed part of the brood-frames into it, while the empty space was filled with wide frames of sections. The queen was confined upon three of the six brood-combs, by perforated zinc above and on the sides. The bees always went into the sections the first day, in traveling from one brood-comb to another.

When I contract my colonies to a 4 or 6-frame brood-nest, on June 20, I am very certain that they will keep pace, in the number of bees, with the uncontracted colonies until July 11. Then it requires 15 days longer for the bees to become honey-gatherers. In my locality I have never known the honey harvest to last until July 15, during any season within the last ten years.

From this it will be seen that the hive may be contracted 36 days before the end of the honey harvest, without diminishing the working strength of the colony, because it requires 21 days for a bee to hatch from an egg, and 15 days after hatching for it to become a honey-gatherer.

Where or how the opponents of contraction have determined that those who practice contraction tolerate small or medium colonies, I am at a loss to know, for it should be a matter of record that those who practice contraction have as "big, rousing" colonies, during the honey harvest, as is possible with any number of brood-combs.

Clinton, Wis.

Benefits of Apicultural Associations.

R. F. HOLTERMANN.

In dealing with this subject, we must take it for granted that the association is in a healthy condition. The requirements for a healthy state I will specify:

When an association forms, and desires to prosper, each member must be prepared to sacrifice self-interest so far as it is necessary for the proper working of the association, but outside of that, every member may, without injury to the association, consult his own interests; and I venture to assert that by so doing every member, without seeking it, really does what is best for himself. What dangers have we, then, to guard against as members of an association?

There are several. In organizing, we must be anxious to put the best men in the best positions; that is, when electing an officer, it should not be a question of "What man do I like best?" but rather, "What man will make the best officer, and fulfill the duties of that office most faithfully?"

An office is no longer an honor when it is to be passed around, like a collection box. The question of honor is secondary, and as soon as it becomes the first question, the office becomes prostituted.

Again, there are members of associations who go to conventions and (like a dry sponge which absorbs moisture) greedily absorb every new idea, but it requires a tremendous amount of squeezing to get any good ideas out of them; not because they do not have them, but because the shell is made of such hard material that they are afraid some one might be benefited by unearthing them. Of course, allowance should be made for those who are too timid to rise in a gathering, and express their thoughts.

An apicultural association, to be the most beneficial, must avoid politics. It must not undertake either to create bee-keepers, or to suppress bee-keeping. It must make every effort to induce actual bee-keepers, or those who have signified their intention to become such, to join the association.

The object of this is to give them all possible benefits, and put them upon the footing of intelligent bee-keepers, and it will also tend to prevent their selling honey at a much lower figure than necessary; it will assist them to produce first-class honey, for which they can obtain the best prices. They are then in the best position to guard against the spread of foul-brood in their apiaries without their knowledge, for associations should be conducted in such a manner that it would not be possible for any member to have foul-brood in his apiary without his knowledge. It might be well, even when there is no law relating to the disease, to appoint a foul-brood inspector who, at the request of three or more members, would inspect any apiary suspected of having the disease. If admission was refused, much would be gained by simply reporting the facts.

Apicultural associations could do much by passing resolutions in their interest, either for submission to government, or to strengthen certain causes. This, however, should not be done too frequently, or they lose their weight. Again, apicultural associations should take a hand in the formation of prize-lists. They should make every honest effort to have large prizes offered, and to have proper judges appointed to award such prizes. I say judges, for I do not believe in the idea of having a single judge.

Honey statistics are very good, and, where the necessary funds can be secured to make them complete, they should be taken; but they are not a complete guide to what the demand for, and price of honey should be. And while speaking on this subject, let me say that it is doubtful if an apicultural association will ever be the proper medium through which to sell honey.

Each individual, as a rule, should be able to work to the best advantage in his own interest, and the energy of many individuals, scattered through the country, will be more useful than that exerted by one or two. Bee-keepers, as a rule, have, during the season in which honey sells best, ample time at their disposal, to devote to this matter.

Apicultural conventions are not solely for those who are posted on everything new; those who know that honey is partially digested nectar, and those who, just as positively, know that it is not: for those who are disgusted at the idea, and those who, very sensibly, are pleased to know that it is, and that their own digestive organs will have so much less to perform. Neither is it for those who know that bees hibernate, and those who do not; nor is it alone for those who want information upon the simplest questions in apiculture. No; it is for all classes, and time should be given for each class, but, as a rule, the simple questions are referred to a committee who may not report at all, or simply answer "yes" or "no."

What wonder, then, that we cannot draw beginners into our midst, and that we should have cause to rail at that class of bee-keepers which we cannot reach through apicultural associations.—*Read at the Detroit Convention.*

Wisconsin Bee-Keepers' Convention.

DR. J. W. VANCE.

The Wisconsin Bee-Keepers' Association met in the Capitol building at Madison, on Wednesday morning, Feb. 4, 1891.

The meeting was called to order by President Hatch. The minutes of the last Convention were read and approved.

A recess was taken for the purpose of allowing members to pay dues.

The following resolution was offered by Mr. Bull, of Seymour:

"*Resolved*, That hereafter the membership fee shall be one dollar, and that a fee of five dollars may constitute a life-membership."

An amendment making the fee ten dollars was laid on the table until the next meeting.

After the reading of the President's address, remarks were made regarding affiliation with the International Society. Mr. Winter moved that a committee be appointed to report upon the subject, and Messrs. Wilcox, Jones and Turner were appointed.

The subject of an exhibit at the World's Columbian Exposition was also brought up and discussed. Dr. Mason's communication upon the subject in the AMERICAN BEE JOURNAL, was read. A committee of three was appointed to report—Messrs. Standish, Wilcox and Turner.

The subject of foul-brood was fully discussed. Mr. Daniher had no fear of foul-brood being carried by queens. In his opinion the disease is carried in the honey that robber bees carry home to their hives. The odor is not always recognizable. But if the odor is very perceptible, there is no hope of cure, and the colony ought to be destroyed.

Mr. Standish moved that a committee be appointed to take into consideration the appointment of a State inspector of foul-brood, or any other Legislation needed respecting the interest of bee-keeping and the production of honey.

Mr. B. F. Rice, of Boscobel, sent in a paper, which was read, the subject being Cellar Wintering, or The Construction of a Bee-Cellar.

Mr. Wilcox had observed that dampness is not hurtful to bees. His cellar was very damp, but his 135 colonies are quiet, and apparently happy. Yet he admits that many good authorities regard dampness as very detrimental to the health of bees, which do not winter as well as in a dry cellar.

Mr. Smith built a cellar something like Mr. Doolittle's, 3 feet in the ground, covered with earth. It is a damp place, but sandy ground; keeps the temperature at from 39° to 45°.

Mr. Snyder built his under his shop, and winters his bees successfully.

The President announced that it was the hour of adjournment, and declared the meeting adjourned until 2 p.m.

AFTERNOON SESSION.

The two societies, the Horticultural and the Bee-Keepers' met jointly at 2 o'clock. The President of the Horticul tural Society read his annual address, which was discussed at some length.

At 3 o'clock the President announced that the hour had arrived for the bee-keepers to proceed with the meeting, and accordingly withdrew, and the President of the Bee-Keepers' Society was requested to take charge of the meeting.

Mr. C. A. Hatch delivered an address upon the relation of horticulture and bee-keeping.

Mr. Thomas G. Newman, of Chicago, followed, and added some glowing remarks upon the necessity of harmony that ought to exist between horticulturists and bee-keepers. Mr. Newman has been the editor of the AMERICAN BEE JOURNAL for the past 17 years. His brisk talk was well received.

The question was mooted as to the injury bees do to grapes. It was generally considered that bees do not puncture or injure the grapes, but when birds or other insects have punctured the fruit, the bees resort to the fruit, and gather what otherwise would be lost.

Questions were asked regarding fragrance and honey. It was concluded that the two go together, and that no flower that had no fragrance was a good honey producer. The President endorsed alsike clover as a good honey plant.

Mr. Bull said that the rose, that is the most fragrant of flowers, is no producer of honey. He said the Simpson honey-plant has no fragrance, yet it is a good honey plant. He does not think buckwheat is more fragrant while honey is being produced than at any other time.

The Simpson honey-plant was mentioned, but most of the members did not regard it as important.

Mr. Wilcox had not much success in planting for honey.

Mr. Turner spoke of the importance of calling the attention of horticulturists to the application of poison to trees in bloom in order to kill insects. He said that if the poison was applied after the fruit had set, there was no danger.

The question was asked as to the poisoning of human beings by poison carried from trees to which poison had been applied, but no one present knew of any such case having occurred.

Bee-stings were next considered. The matter of bee-stings was regarded as a thing easy to avoid by proper protection. Bee-keepers try to avoid arousing or angering bees. Bee-veils, hats and gloves, are used by many, but the quiet action of the bee-keeper and care in handling them, will enable the bees to be handled without stinging. Sometimes smoke angers rather than quiets them. All beginners should wear veils, and thus acquire greater confidence.

Adjourned until to-morrow morning, at 10 o'clock.

THURSDAY MORNING.

The Convention was called to order at 10 a.m., by President Hatch. Secretary Vance being absent, H. Lathrop, of Browntown, was elected Secretary *pro tem.*

The Committee on Appropriations brought in a report recommending that the State be requested to appropriate $1,000 to be expended in defraying the expenses of a honey exhibit at the Columbian Exposition. Report adopted.

The Committee on Affiliation recommended that our Association remain in affiliation with the International Association another year. The report was concurred in.

Mr. Thomas G. Newman, in reply to questions about medals and diplomas for the affiliated societies, said that the treasury had been emptied last year to provide for Father Langstroth, who was sick and in need. and that the Society had no means to spend for their manufacture. Now, we are adding a number of life-members, and money is on hand. and the medals will be prepared in good time for use by the affiliated societies. for exhibits at Fairs, etc. This explanation of the action of the North American Bee-Keepers' Association, received hearty applause.

The Committee on Foul-Brood asked for an extension of time, our Society not being incorporated, it may become necessary to incorporate before any Legislation in our behalf may be obtained. The fee of ten dollars was raised by voluntary contributions.

Mr. Newman made a very interesting speech in behalf of the Bee-Keepers' Union. His remarks stirred the hearts of his hearers to such a degree that a large number of the members present agreed to affiliate.

The matter of raising annual dues was laid over until the next meeting. A paper by Mr. Freeborn, of Ithaca, on the Discouragements of Bee-Keeping, was read.

A motion prevailed that we hold our next annual meeting jointly with the Horticultural Society.

On motion, Mr. Newman was made an honorary life-member of the Association.

The Treasurer reported that after paying all expenses and premiums on honey displayed, there remained on hand a balance of $4.46.

The Committee on Honey Exhibit reported as follows; Award to H. Lathrop, 1st prize on extracted basswood honey; 2d prize, to F. L. Snyder for the same. First prize on white clover, extracted, H. H. Brown.

The Committee on Nomination of Officers reported as follows: President, C. A. Hatch; 1st Vice-President, T. E. Turner; 2d Vice-President, J. J. Oechsner; Recording Secretary, H. Lathrop, of Browntown, Green county; Corresponding Secretary, Dr. J. W. Vance, of Madison; Treasurer, M. J. Plumb—and the nominations were confirmed.

The following resolutions were reported and adopted:

1. That we cordially approve of the work of the Bee-Keepers' Union, as shown by its past history, and rejoice in the hope that its field of labor will be so enlarged and extended as to enforce the laws against the adulterations of honey, large quantities of which are now placed upon the markets, greatly to the disadvantage of honest honey-producers. And be it further resolved that it is the duty of all bee-keepers to join the Union for the furtherance of that end.

2. That this Association send one delegate to the next American Bee-Keepers' Convention, and pay $10 toward his expenses.

Detecting Queenlessness.

DR. C. C. MILLER.

The answers to Query 733, and the article on page 15, that they have called forth, show that a reconsideration is needed of a question that many had considered settled. When so careful an observer as Mr. Doolittle makes a statement, it is not wise to be hasty in questioning it, but it is safe to ask exactly how that statement is to be understood.

On the face of it, it looks as though Mr. Doolittle meant to be understood as saying, "if a queen be taken away from one part of a divided colony, and there still remains the means of raising a queen, in no case will any actions of the bees outside the hive indicate their queenlessness."

This may be true, but it is certainly contrary to tradition, and contrary to some pretty good authority. The revised Langstroth, speaking of a case where a queen is carefully removed, and the bees after some time find out their queenlessness, says:. "At such times, instead of calmly conversing, by touching each other's antannæ, they may be seen violently striking them together, and, by the most impassioned demonstrations, manifesting their agony and despair." Is it likely such violent demonstrations will take place in the hive without any appearance of it outside? The very next sentence helps us out on that, saying: "We once removed the queen of a small colony, the bees of which took wing and filled the air, in search of her."

How about the testimony of the 13 out of 17 respondents to the question? At least 6 of them are positive and circumstantial in their evidence. Are these 6 and the rest of the 13 blindly following tradition, without ever having made any observations of their own? Even if they were quite willing to do so, are not the occasions for observation so frequent, that their attention would be given either to verify or refute the tradition? If 4 say they never saw any of the evidence under discussion, does that prove that the other 13 never did?

At the time of making my reply, if I had answered more fully, I should have said, "I think that in all cases where a queen is removed from a colony in the working season, when the bees find out their queenlessness, there will be demonstrations of anxiety more or less marked, and, usually, close observation will detect something of the kind on the outside of the hive. These demonstrations may not be of long continuance, but will occur at intervals.

To make any kind of sure work in deciding, it might, and usually would, be necessary to watch very closely, and for a long time. I have had hundreds of such cases of queenlessness, and have seldom seen anything in the actions of the bees, either outside or inside, to show that they recognized it before the starting of queen-cells. Still, if I had given my entire attention to any one case for a sufficient length of time, I think I would have seen signs of queenlessness. One without experience, however, might have difficulty in recognizing the signs, when seen." You will see that my reply on page 677 is in consonance with this view. I there said, "By watching closely enough, you may see signs of discontent and excitement in the queenless part. I should prefer to wait and see which started queen-cells, or was without eggs." Other replies were much in the same line.

Mr. Doolittle's position causes me some doubt as to the correctness of mine. If he means just what appears on the surface, then I, and no doubt others, will consider the whole thing the coming season.

Marengo, Ills.

Alfalfa Honey in California.

S. RANEY.

On page 199 you give the San Francisco *Chronicle* as an authority for a paragraph entitled, "No Alfalfa Honey in California." The *Chronicle* is a little too broad in its statements, for I have seen honey in glass, labeled "Alfalfa Honey," for sale in retail stores. The *Chronicle* should be proud of the bee-keepers in this State—that they are not so conscience-hardened as to be declaring to the world that the honey they offer for sale is Simon pure "alfalfa" honey. In some parts of this State, however, they are learning rapidly the habits of our truthful (?) Eastern brothers, as I saw not long since, some honey from an apiary in Southern California, labeled "Warranted Orange-Blossom Honey;" and I am informed by good authority, that there are no orange trees old enough to bloom within ten miles of where this same honey was produced. It was probably produced from a sort of chaparral bush, or desert shrubbery of that locality. I have no doubt the consumers of that honey will smack their lips over the delusion of a genuine orange flavor.

Alfalfa, in many localities, is new in Colorado, while in California it is so common that "alfalfa honey" would not lend any special delusion. Of course, most of us know, that bees get honey wherever they can, no matter if it is from pig-weed, and it tastes just as well to the bee as if it were obtained from a tree or plant over which foolish man goes into ecstasies.

Alfalfa does produce excellent honey, even in California—sometimes in larger quantities than other plants. I have known bee-keepers to move their bees to the locality of alfalfa fields, when the alfalfa in their neighborhood had been plowed up. Alfalfa, when cultivated for profit to the producer, is not allowed to blossom to its full capacity, as it is cut or pastured off before that age. I have seen bees going almost like a swarm to alfalfa in bloom, and again have seen nice blooming alfalfa when you could not find a single bee about it.

Bees here obtain nice honey from what is called "sunflower," a sort of rosin-weed which is the pest of the country—it even smothers out a wheat crop. It blooms from June to November. We could label the honey "alfalfa" or "orange blossom," and the majority of the consumers in other localities would not be able to detect the special flavor *of the label!*

There does not seem to be a fortune in keeping bees here. Choice comb, one-pound sections, sells for 9¾ cents net; extracted, net, 4 cents; almost-white, one-pound sections, on sale in retail stores at 9 cents. Home market not profitable.

My bees averaged about 20 pounds of comb-honey, and 10 pounds of extracted, last season, with a fair increase. They are all nearly pure Italians, wintered, of course, on the summer stands. I have over 150 colonies in Langstroth hives, large size, and use one-pound one-piece sections. I am a subscriber to the AMERICAN BEE JOURNAL, and believe the membership fee to the National Bee-Keepers' Union is well invested.

Lemoore, Calif.

Some Pointers About Bees.

C. A. BUNCH.

When bees are gathering honey in the field, I have known them to go from alsike clover to the common white clover, and back again to alsike, which proves that they do not always get their load of nectar from the same kind of flower. I have also seen bees gather pollen from timothy and common red-top.

In trying to unite bees during a dearth of honey, I have seen drones stung to death at once, the same as the workers. I have also seen bees sting their own drones during a dearth of honey, instead of only pretending to do so.

If the bee-keeper understands wintering bees successfully, the hives can be carried and put in rows as soon as the surplus is taken off, say, Sept. 20, and let the old workers shift for themselves, and the bees will winter well, but later on, after the bees have all taken a flight, it would be doubtful business. Bees will winter well on unsealed stores if properly protected by clover chaff, or other good packing.

Eight-frame Langstroth hives are too small for comb-honey production in this locality. Nine-frame hives are by far the most profitable, providing we keep bees for the money and fun there is in it.

Parties running a hive factory should always understand bee-keeping, for if they do not, they are liable to send out chaff hives to their customers with only ⅜x8-inch entrance, instead of full width as all successful honey-producers know they should be.

I cannot see how a trade-mark for the Union would be of any benefit. What is a better trade-mark than a man's name stamped upon each and every section of honey, and on every package of extracted honey. The article on page 183, should serve as a pointer.

Do not expect something for nothing, but give the busy bee a chance. Now is the time to send to the office of the AMERICAN BEE JOURNAL and get your alsike clover seed. Mix about one-half as much common red clover seed with it, also some timothy seed, say, one-fourth, and take my word for it, you will have the finest quality of hay for your cow or horse, besides the pleasure of seeing the bees just roaring over the alsike for the nectar it will produce.

Nye, Ind., Feb. 12, 1891.

Modified Langstroth Hive.

J. T. COOLEY.

I have kept bees for 28 years, but never more than 50 colonies at a time. I live in the city of Ottawa, and do not have a first-class pasture for my bees. When I first began bee-keeping, 25 pounds of surplus honey from each colony was considered a very good crop, but now, if I do not get 100 pounds of honey per colony, Spring count, I think there is something wrong. I extract the most of my honey, and sell the bulk of it in my home market, at a fair price. I have tried a great many hives, but did not find anything to suit me exactly, until I made a modification of the Langstroth hive, and now I think I have just what is needed. I have wintered bees in the upper story of a dwelling-house, in the cellar under the house, and in a house where I kept them both Summer and Winter, but mostly on the summer stands ; and were it not for the inconvenience of manipulating, I would prefer to keep them in the house, both Summer and Winter. Last Spring I had 15 colonies in fair condition, mostly hybrids, and obtained 800 pounds of very fine quality. I have no use for wired frames, and, for the production of extracted-honey, prefer not to use reversible hives. Thus far, bees seem to be wintering finely. And now, brother bee-keepers, this is the first time you have heard from me through the BEE JOURNAL, and, as I am 86 years old, it may be the last. I prize the AMERICAN BEE JOURNAL very highly.

Ottawa, Ills., Feb. 10, 1891.

CONVENTION DIRECTORY.

Time and place of meeting.

1891.

Feb. 26.—Capital, at Springfield, Ills.
C. E. Yocom, Sec., Sherman, Ills.

March 10, 11.—Huron, Tuscola and Sanilac Counties at Caro, Mich.
Jno. G. Kundinger, Sec., Kilmanagh, Mich.

April 1, 2.—Texas State, at Greenville, Texas.
J. N. Hunter, Sec.

May 7.—Susquehanna County, at Montrose, Pa.
H. M. Seeley, Sec., Harford, Pa.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place, of each future meeting.—THE EDITOR.

North American Bee-Keepers' Association

PRESIDENT—P. H. Elwood....Starkville, N. Y.
SECRETARY—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

PRESIDENT—James Heddon ..Dowagiac, Mich.
SEC'Y AND MANAGER—T. G. Newman, Chicago.

Bee and Honey Gossip.

Good Prospects in Nebraska.

I had 5 colonies, Spring count, which cast 2 swarms, and gave me 60 pounds of comb-honey, in one-pound sections. My old colonies had plenty of Winter stores, but to the new ones I gave partly-filled sections, in the supers, in October, which they carried down. I have the 7 colonies in a clamp out-of-doors, and they are doing well, and have taken several flights on warm days. The season of 1890 was a poor one, but indications point to a better crop this year.

F. R. REITER.

Phillips, Nebr., Feb. 16, 1891.

Watering the Bees.

I have read in the BEE JOURNAL several plans for watering bees, but as none of them are as good as the one I use, I will describe it: Take a 2-inch board about 15 inches wide, and long enough to accommodate the bees without crowding them. Bore one side of it full of auger holes, about ½ inch deep, and connect them by cutting little trenches with a knife, so that when water is allowed to drop into one hole, soon every hole in the board will be filled. I then place the board in the shade, with one end just the least bit lower than the other.

Place a keg or stone jar (a stone jar is best because the water will keep cooler and purer in it) of water, with a faucet in it, so that the water will drop into one of the holes at the highest end of the board, and soon every hole and trench will be full of water, and the surface between the holes will be moistened. Place this contrivance in the shade, renewing the water every day, and you have a plan for watering bees that I do not believe can be improved upon. J. A. C. DOBSON.

Brownsburg, Ind.

Italianizing an Apiary.

The answer to A. J. Duncan, page 229, suggests a point that is often overlooked. Should he introduce 40 Italian queens any time this Spring, he would have 40 colonies stocked with black drones, ready for his young queens; but if he introduces his queens in the Fall, this trouble will be avoided.

J. M. MITCHELL.

Knob Noster, Mo., Feb. 16, 1891.

Clamps for Standing Frames.

Clamps for holding frames in place, seem to be a source of great trouble to some bee-keepers. I use a hive, the back of which is supplied with hinges, so that it may be turned down half-way, and a thin follower, the upper half of glass, fixed in each side with slides, made of blass wire, attached for tightening up the frames. Bees are doing finely, and on Feb. 6, had their first flight of the season, having unmistakable signs of early breeding. B. LOSEE.

Cobourg, Ont.

Good Courage.

Last Spring I had 73 colonies of bees. I had no swarms or honey. I put 70 colonies into winter quarters, which are doing well. My courage is good for 1891. T. M. HERRICK.

Woodstock, N. Y.

Pure Food Bill.

I wrote to our Senator, G. G. Vest, asking him to do all he could for the Pure Food Bill now before Congress. His reply was, "He would support it." It was possible he would vote for certain amendments to the bill, but with its general object he was heartily in sympathy.

R. G. ROBERTSON.

Pres. Salem (Mo.) B.-K. Ass'n.

Foul-Brood Legislation.

In "Editorial Buzzings," page 213, is a statement that the Legislature of Wisconsin is about to pass a law for the eradication of foul-brood, and I think there should be such a law in every State. In the Northern portion of this State, and especially in the vicinity of Denison, it is very prevalent, many bee-keepers having lost colonies thereby, without knowing the cause of such loss. I have had considerable experience with methods for eradicating foul-brood, and have found transferring to be the most successful, but even that does not prove effective when there are other colonies in the neighborhood afflicted with the same disease. The bee-keepers of this State should unite in an effort to secure the adoption, by our Legislature, of measures for stamping out the disease.

C. M. DAVIS.

Denison, Tex., Feb. 15, 1891.

Hold the Meeting at Decatur.

In regard to the proposed meeting of the bee-keepers of the State, for the purpose of forming a State Association, and the time and place therefor, I am in favor of the meeting being held in Decatur, it being a central point, and with sufficient accommodations for all who may come, and as Mr. Hughes suggested, I think April 8, would be soon enough for all purposes.

R. T. DAVIS.

Decatur, Ills., Feb. 16, 1891.

Exhibits at the State Fair.

I consider it necessary to say a few words in reply to Mrs. Harrison (page 843—Dec. 20, 1890), even though deeming the article uncalled for, and believing it would have been better had she taken the trouble to examine the Secretary's books, and then given a full report. I failed to discover that the Iowa men did not exhibit all of their comb-honey, and as to their comb-honey being the best, that is a question that admits of argument. The quantity was greater, but the question of quality is another thing. Perhaps it is a matter of minor importance that Aaron Coppin received a premium of $3 on "a little bit of comb-honey," but not for lack of competition, as there was one display of comb-honey which must have amounted to 500 pounds, but it received no premium. Now, I will ask, Who were the exhibitors of bees and honey at the Fair in 1890? Mr. D. D. Hammond, of

Malone, Iowa, and Mr. Wm. Kimball, of DeWitt, Iowa, were the owners of nearly all the honey, and Aaron Coppin was the owner of every colony of bees on exhibition, and the bee and honey show would have been a very slim affair, except for the displays of the exhibitors above named. Mrs. Harrison also refers to me as the best grumbler at the Illinois State Fair, but fails to state the cause of the grumbling, and I would be very much pleased if she would do so. I could state the reasons, but am ashamed to publish to the world the manner of doing business, in connection with the bee and honey show, at the Illinois State Fair. If the readers of the BEE JOURNAL knew the cause of the grumbling, I am satisfied they would say that it was time for some one to do a little fault-finding.

Wenona, Ills. AARON COPPIN.

Alfalfa Honey.

The Winter has been mild so far, with very little snow; lowest temperature 10° above zero. Bees with plenty of stores are wintering well on the summer stands. The honey crop of 1890 was below that of 1889. From 34 colonies, Fall count, in 1889, I received 1,400 pounds of honey; while, from the same number of colonies in 1890, only 1,200 pounds was secured, all white comb-honey, being gathered from alfalfa. Comb-honey sells readily at 16 cents per pound, wholesale. F. H. McDONALD.

Star, Idaho, Jan. 24, 1891.

Have Done Well.

My 39 colonies of bees gave 4,000 pounds of comb and extracted-honey last season, and increased to 62 colonies. I lost 2, and the others are in good condition. I attribute my success to the AMERICAN BEE JOURNAL.

Independence, Ky. M. G. BAGBY.

Bees in South Dakota.

Bees are wintering nicely in South Dakota. We had a very small surplus last year, but prospects are more favorable for next season. Most bees are on the summer stands, which, perhaps, is the best way they can be wintered here; but it must be remembered that South Dakota is much warmer than other States in the same latitude. I hope the BEE JOURNAL may reach all the bee-keepers in the West, as it is best adapted to our wants. R. A. MORGAN.

Vermillion, S. D., Feb. 16, 1891.

Fine Prospect for White Clover.

On Dec. 4, I put 48 colonies into winter quarters, in fair condition, and do not think they have broken cluster since. The thermometer has registered from 38° to 40° above zero during the last 4 Winters. I had one colony on scales last season, and weighed them every night, and the last 19 days of June they put in 84 pounds of honey; then the honey-flow ceased for 1890, and the bees did not make a living after that. Prospects for white clover never were better. I think of joining the Union, if found worthy. A. S. STRAW.

Edwardsburg, Mich., Feb. 8, 1891.

Poplar Trees.

Of just what value is poplar to the bee-keeper? Do the bees get much honey from it? At what time (in what month) does it bloom? A. I. Root makes no mention of it in *Gleanings* (so far as I can see), and I cannot find much anywhere to enlighten me on the subject. There are thousands of acres of poplar trees a few miles from here, and if they are valuable honey-producers, I want to know about it. Do any of the readers of the BEE JOURNAL know anything positively about the matter?

P. D. ELLINGWOOD.

Berlin Falls, N. H., Feb. 12, 1891.

Self-Hiving Arrangement.

I saw in the AMERICAN BEE JOURNAL for 1890, page 169, an article on the management of bees in swarming time, by Frank Coverdale. What I wish to know is, when the hive of the parent colony is put on top of the newly-hived swarm, is the entrance on the old hive left open all the time, from the first, until the old hive is taken off the new swarm, so that bees can fly in and out of the old hive, and also, at the same time run up and down into the new hive by the corner of the enameled cloth being turned back over the section boxes on the new swarm? If so, it looks to me as if the heat would leave the lower hive too much.

WM. M. WHITE.

Chestertown, N. Y.

We sent the above to Mr. Coverdale for reply, and this is what he writes:

In answer to Mr. White, I will say that while the swarm is on the wing arrange everything as described on page 169 [1890]. The body of my hive has no entrance. The entrance is on the bottom-board. A ⅜-inch cleat is nailed on top, around the outer edge, on one end and both sides; the end left without a cleat forms the entrance. As I understand, your hive-body contains the entrance. If you must work with this system, saw the bottom edge of the hive-body until just even with the top of your entrance, then nail the strip that you have sawed off down on the bottom-board (where it belongs). This requires accurate work, but I think that with a saw, Jack-plane, hammer and nails, you can accomplish the desired result. In regard to heat leaving the bottom (or new brood-chamber), you need not fear, for great numbers of bees will be there, as they are prone to leave the upper or old brood-chamber, rather than that where the queen is in restraint. This is what strengthens my faith that a self-hiving arrangement will yet be perfected, for the bees will cling to their queen, rather than to queen-cells.

FRANK COVERDALE.

Welton, Iowa.

Spring Packing.

In the Spring of 1890, I took 7 hives, with caps 7 inches deep, and porticoes and broad boards to keep off the sun and rain, and lined them with asbestos paper, such as plumbers wrap steam pipes with, which I thought would be good to keep the heat in, and later to keep it out. I covered the asbestos with wood separators, lifted the frames of bees and honey out of the other hives into them, covered the brood-frames with a quilt, and packed the cap with dry straw, expecting to see them build up very rapidly; but imagine my surprise to see that the first colony to build up was one in a single-walled hive, with nothing over it but a quilt and a board shade, the latter being raised an inch at the back end, giving free circulation of air over the quilt. I also packed the caps of many more, and watched carefully, but failed to see any benefit therefrom. While Spring packing may be beneficial, the above-mentioned experiment has led me to think otherwise.

O. B. BARROWS.

Marshalltown, Iowa, Feb. 16, 1891.

Patent Rights.

I see that it is dangerous to speak of impressions. I did not intend to say, at Detroit, "that I knew that the impressions gathered by the readers of *Gleanings*, were that patents were not honorable property." I said "that I thought the influence of *Gleanings* had caused people to disrespect property in patents, and so disregard people's rightful claims in such property." If it has exerted such influence, it has, of course, been thoughtless and unintended. Yet, just as certainly, it has incited towards dishonesty. All property should be respected. Patent property is *real* property in the sight of the law and in the sight of reason. Therefore, any word that makes people think of or treat such property lightly, is to be regretted. It is wise to urge every one to be very careful in buying patent rights, or any patented article—never to buy until they know that it will do what they wish to have done. It is always our right to let a patented article alone, and as truly our *absolute duty*, unless we feel that we desire and need it, and pay for the right to use it.

A. J. COOK.

Agricultural College, Mich.

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The American Bee Journal	$1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Guide	1 50	1 40
Bee-Keepers' Review	2 00	1 75
The Apiculturist	1 75	1 65
Canadian Bee Journal	1 75	1 65
American Bee-Keeper	1 50	1 40
The 7 above-named papers	6 00	5 00
and Langstroth Revised (Dadant)	3 00	2 75
Cook's Manual (1887 edition)	2 25	2 00
Quinby's New Bee-Keeping	2 50	2 25
Doolittle on Queen-Rearing	2 00	1 75
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 60	1 50
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	2 20
Western World Guide	1 50	1 30
Heddon's book, "Success,"	1 50	1 40
A Year Among the Bees	1 50	1 35
Convention Hand-Book	1 50	1 30
Weekly Inter-Ocean	2 00	1 75
Toronto Globe (weekly)	2 00	1 70
History of National Society	1 50	1 25
American Poultry Journal	2 25	1 50
The Lever (Temperance)	2 00	1 75
Orange Judd Farmer	2 00	1 65
Farm, Field and Stockman	2 00	1 65
Prairie Farmer	2 00	1 65
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Nebraska Bee-Keeper	1 50	1 35

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If you have a desire to know how to have Queens fertilized in upper stories, while the old Queen is still laying below—how you may *safely introduce* any Queen, at any time of the year when bees can fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact, everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and is as interesting as a story. Price, bound in cloth, $1.00. For sale at this office.

Supply Dealers, before issuing their Catalogues for next season, should write to us for terms on the Globe Bee-Veil. We have sold over 1,200 within the past year. They give universal satisfaction.

The Investment of a dollar in the BEE JOURNAL, gives you 52 dividends in a year. Can any one desire a better investment? or will they ask for richer returns?

A Word of commendation from our readers to those not among our subscribers, will be more potent than anything we can say. If you like our JOURNAL—please let your neighbor know it, and let us thank you in advance for this favor.

Subscribers whose time does not expire for some months can safely renew at any time, without fear of loss, because we always extend the time from the date of expiration on our books. If you want any other magazine or newspaper, we can furnish it, and save you money by clubbing it with the BEE JOURNAL. See our list of a few of them on page 295.

Bee-Keeping for Profit, by Dr. G. L. Tinker, is a new 50-page pamphlet, which details fully the author's new system of bee-management in producing comb and extracted-honey. and the construction of the hive best adapted to it—his "Nonpareil." The book can be had at this office for 25c.

Supply Dealers should write to us for wholesale terms and cut for Hastings' Perfection Feeders.

HONEY AND BEESWAX MARKET.

DETROIT, Feb. 16.—Comb Honey is selling slowly at 14@15c. Extracted, 7@8c. Beeswax in fair demand, 27@28c.
M. H. HUNT, Bell Branch, Mich.

NEW YORK, Feb. 14.—Market is very quiet, especially on comb honey. We quote: Fancy white 1-lbs., 15@16c; 2-lbs., 13@14c; off-grades, 1-lbs., 13@14c; 2-lbs., 12c; buckwheat, 1-lbs., 11@12c; 2-lbs., 10c. Extracted, basswood and white clover, 8@8½c; buckwheat, 6½@7c; California, 6¾@7¼c; Southern, 65@70c per gallon. Beeswax, 25@27c.
HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

KANSAS CITY, Feb. 14.—The demand for honey is improving; receipts and supply very light. We quote: White 1-lb. comb, 16@18c; dark, 12@14c. California white, 2-lb., 14@15c; dark, 11@12c; extracted, 6@7c. Beeswax, 22@25c. CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CINCINNATI, Feb. 20.—Demand is good for all kinds of honey, with a good supply on the market of all but Southern honey, which is scarce. Choice comb honey brings 16@17c per pound. Extracted honey, 6@8c.
Beeswax is in good demand at 24@26c., for good to choice yellow. C. F. MUTH & SON,
Corner Freeman & Central Aves.

CHICAGO, Feb. 16.—Demand at present not very active on comb honey. Fancy white, 18c; white, 17c; white 2-lb. sections, 15c; buckwheat, 1-lb. sections, 13c; extracted, 7@9c. Beeswax, 28c.
S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, Feb. 14.—Fancy white 1-lb. comb, 18c; fair to good, 17c; dark 1-lb., 14@15c; 2-lb. white comb, 15@16c; 2-lb. dark, 13@14c; extracted, white, 7c; dark, 5@6c.
HAMBLIN & BEARSS, 514 Walnut St.

CHICAGO, Feb. 21.—The volume of trade in honey is very small. A few of the best lots are taken at 17@18c; but where the condition and appearance of honey is a little off, 16c is about the top. The supply is not large, but there seems to be about enough for the trade. Extracted, is selling at 7@8c, with fair trade.
Beeswax, 27@28c.
R. A. BURNETT, 161 S. Water St.

BOSTON, Feb. 16.—Honey is in fair demand; supply short. Fancy, 1-lb. comb, 19@20c; fair to good, 18@19c; 2-lb. sections, 16@17c. Extracted, 8@9c. There is no beeswax on hand.
BLAKE & RIPLEY, 57 Chatham Street.

ALBANY, N.Y., Feb. 14.—The honey market is quiet, with small stocks and light demand; prices steady. We are selling white at 16@18c; mixed, 14@15c; dark, 12@14c. Extracted, white, 8@9c; dark, 6@7c. Beeswax, 28@29c.
H. R. WRIGHT, 326-328 Broadway.

Convention Notices.

☞ The 13th annual session of the Texas State Bee-Keepers' Association, will be held at Greenville, Hunt Co., Texas, on April 1, 2, 1891. All interested are invited. J. N. HUNTER, Sec.

☞ The Huron, Tuscola and Sanilac Counties Bee-Keepers' Association, will meet in convention at Court House, at Caro, Tuscola Co., Mich., March 10, 11. All interested are cordially invited to attend, as it promises to be one of the best meetings the Association ever held.
JNO. G. KUNDINGER, Sec., Kilmanagh, Mich.
H. E. GORDON, Pres., Unionville, Mich.

☞ The 8th semi-annual meeting of the Susquehanna County Bee-Keepers' Association will be held at Montrose, Pa., on Thursday, May 7, 1891.
H. M. SEELEY, Sec., Harford, Pa.

Vick's Floral Guide for 1891.—No lover of a fine plant or garden can afford to be without a copy. It is an elegant book of over 100 pages, 8¼x10½ inches, containing beautiful colored illustrations of Sunrise Amaranthus, Hydranges, and Potatoes. Instructions for planting, cultivating, etc. Full list of everything that can be desired in the way of Vegetable and Flower Seeds, Plants, Bulbs, etc. Also, full particulars regarding the cash prizes of $1,000 and $200. The novelties have been tested, and found worthy of cultivation. We hope it will be our good luck to see the Nellie Lewis Carnation, and taste the Grand Rapids Lettuce. It costs nothing, because the 10 cents you send for it can be deducted from the first order forwarded. We advise our friends to secure a copy of JAMES VICK, Seedsman, Rochester, N. Y.

◆

☞ This week's issue of "Frank Leslie's Illustrated Newspaper" might well be called the Gen. Sherman number. The magnificent funeral pageant in New York is pictured, and the work is beautifully executed, the portraits of notables being easily distinguished.

British Bee Journal

AND BEE-KEEPERS' ADVISER.

IS PUBLISHED every week, at **6s. 6d.** per annum. It contains the very best practical information for the apiarist. It is edited by Thomas Wm. Cowan, F.G.S., F.R.M.S., etc., and published by John Huckle, King's Langley, Herts, England.

Wants or Exchanges.

Under this heading, Notices of 5 lines, or less, will be inserted at **10 cents per line**, for each insertion, when specially ordered into this Department. If over 5 lines, the additional lines will cost 20 cents each.

WANTED.—To exchange 1-lb. thin Vandervort f'd'n for 2 of wax. Samples and testimonials free. C. W. DAYTON, Clinton, Wis.
8A10t

WANTED—To exchange Strawberry Plants for Poultry, or other leading varieties. Address, DOUGLASS BROS., Hambury, Mich.
9A1t

FOR SALE.—40 colonies of bees, $3.00 per colony, aboard cars, all in Langstroth hives, painted. Will ship from 1st to 15th of April, 1891. Am going South.
9Atf L. REED, Orono, Osceola Co., Mich.

EXCHANGE—Hives, etc., for Horse. Foundation for wax. Theological Encyclopedia, U. S. History Encyclopedia, and other good books, for honey, cow, cash. Price-list, cheap goods, books, hives, etc., for name.
9A1t APIARY CO., St. Joe, Mo.

PRATT *GOLDEN CARNIOLAN QUEENS, BEE HIVES, ETC.*

LARGEST CATALOGUE PUBLISHED.

Send stamp to pay postage. It contains information for bee-keepers. ☞ Queen circular free. Send 10c for "Pratt's New Method of Nuclei Management."

E. L. PRATT,
PRATT BEE FARM. Beverly, Mass.
9Dtf

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Send Me Your Beeswax To be made into FOUNDATION

I have Root and Vandervort Mills. Samples of work FREE.

9A1t **C. A. HUFF, Clayton, Michigan.**

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The Greatest Invention of the Age!

Bees Made to Hive Themselves When they Swarm.

Particulars free. H. ALLEY, Wenham, Mass.

Mention the American Bee Journal.

HOLD ON!

Are you thinking of buying a Queen this year?

TRY AN ALBINO!

They can't be beaten. Send for my descriptive Catalogue, which is now ready.

A. L. KILDOW, Sheffield, Ills.
8Etf

Two Weeks From receipt of order (cash with the order) Cary, Langstroth or Standard Langstroth Frame Hives, Automatic Foundation-holding frames, in the flat, $1.00; nailed and painted, $1.50. Best work and material. Any hive to order at low prices. Write me. E. A. BALDWIN, West Upton, Mass.
47Dtf

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FREE AS A PREMIUM We will present this Book to any person sending us one new subscriber for the BEE JOURNAL, or the HOME JOURNAL, with the subscription price for a year.

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—o—

Send for Illustrated Price-List of Dovetailed and other style Hives, Snow-white Sections, Golden-colored Italian Bees and Queens, and everything needed in an apiary.

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44D13t 11M6t

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PRIZE
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THE **universal favor** accorded TILLINGHAST'S PUGET SOUND **Cabbage** SEEDS leads me to offer a **P. S.** GROWN **Onion,** *the finest Yellow Globe in existence.* To introduce it and show its capabilities I will pay $100 for the best yield obtained from 1 ounce of seed which I will mail for **30** cts. **Catalogue free.**

Isaac F. Tillinghast,
La Plume, Pa.

8A3t 3M5t

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True Danvers Onion Seed!

MY Seed Farms extend into Danvers, and I frequently buy of the best onion raisers there, hundreds of bushels of their handsomest onions, to plant to grow seed from, sometimes paying as high as $5.00 a barrel. I offer such seed, all this year's growth, and of my own raising, at $3.00 a pound, with a discount on large quantities. Much of the onion seed sold is either too flat or too round for true Danvers. Choice Danvers Carrot Seed, $1.08 per pound. Seed Catalogue sent **FREE** to every one.

J. J. H. GREGORY & SON, Marblehead, Mass.

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FREE HOMES At the rate they have been going the Public Domains will all be gone in 5 years. Now is the time to secure as Rich Land as the Sun shines on at **$1.25 per acre.** What better could be left for Children? Where these Lands are; how to get them, as well as for information of all States and Territories, send **10 cents** and receive the beautiful Engravings, a Picturesque Panorama of the United States. Address **THE WESTERN WORLD, Chicago, Ill.**

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YES, astonishing that only one State has yet responded to my advertisement, and that State is not Michigan. If you wish to try my Potatoes for those 17 three-frame Nuclei, and the full colony of my 5-banded Italians, and for their good qualities, order at once and run your chances on the Tested Queens Free. This will not cost you anything; or, if preferred, the first response can have his money returned. Order at once. Don't wait. Catalogue now ready.

JACOB T. TIMPE, Grand Ledge, Mich.
7Atf
Mention the American Bee Journal.

LOOK! ORDER QUICK

If you want some of those 5-banded Italians, gentlest, best workers, most beautiful Bees known; took first premium at the Ills. State Fair in 1890. Warranted Queen, $1.25; tested, $2.00; selected tested, $3.00, before June 1; lower after; order now; pay when Queens are ready. Langstroth or Simplicity Brood Combs wanted in exchange at 8 cts. each. **No Foul-Brood.** Good reference given.

S. F. & I. TREGO, Swedona, Mercer Co., Ills.
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1891. IF YOU WANT 1891.

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Send for my Illustrated Price-List. **Quinby Smokers** a specialty; all sizes kept in stock; also all kinds of Foundation. Dealers should send for wholesale list of Smokers.

W. E. CLARK,
8A24t ORISKANY, Oneida County, N. Y.
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Rational Yet Reverent.

For those who believe in Religion, but question miracles, and everlasting punishment, and fail to see the justice in schemes of vicarious atonement. UNITY stands for a Religion that is rational and a rationalism that is religious, and for a religious fellowship that welcomes all who wish to work together for the advancement of Truth, Right and Love in the world. 32 columns, including a sermon every week. $1.00 a year, but to a new subscriber, mentioning this advertisement, it will be sent a whole year for 50 cents. **CHARLES H. KERR & CO., Pubs., 175 Dearborn St., Chicago.**
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LEVERING BROS., Wiota, Cass County, Iowa.
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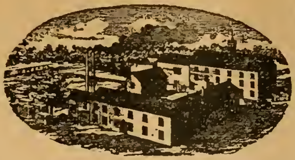
Mention the American Bee Journal.



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E. KRETCHMER, Red Oak, Iowa.
8Etf
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7Atf PRICE-LIST FREE.
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WE are prepared to furnish to Bee-Keepers all kinds of Supplies promptly, and at lowest rates. Correspondence solicited and estimates gladly furnished. Our goods are all made of the best material and are FIRST-CLASS in every respect. Catalogues and Price-Lists free. Reference—First Nat'l Bank, this place.

Address, **WM. McCUNE & CO.,**
43D1y STERLING, ILL.
Mention the American Bee Journal.

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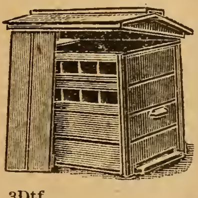
1Dtf M. H. HUNT, Bell Branch, Mich.
Mention the American Bee Journal.



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3Dtf
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A **PAMPHLET,** treating of the taming and handling of bees. Just the thing for beginners. It is a chapter from **"The Hive and Honey-Bee, revised."** Price, **8 cts.** Advice to beginners, Circulars, &c., free.

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Hamilton, Hancock Co., Ills.

HOLD ON! Don't order your Supplies before receiving my Price-List of everything in the Bee-Keepers' line, made by improved machinery. Early orders will be filled without delay. Imported and Home-bred Italian Queens a specialty, in their season. If you want an Imported Queen this season, let me hear from you soon. Satisfaction guaranteed with all my goods. Prices low as the lowest. Send your name on a Postal Card.

A. A. WEAVER, Warrensburg, Mo.
6A13t

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With great premium offers, on receipt of **10 Cents** and addresses of **10 MARRIED LADIES.** Best monthly in the world, for the price. Address **WOMAN'S WORK, Athens, Georgia.**
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J. STAUFFER & SONS,
(Successors to B. J. Miller & Co.)
31Atf NAPPANEE, IND.

BEESWAX WANTED.

Beeswax.—We will pay **25 cents** per pound, in Cash, for Yellow Beeswax, delivered here.

☞ To avoid mistakes, the name of the shipper should always be on each package.

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Is the sort now sent out for the first time, the Perfection. The Snowball, Gilt-edged and Extra-early Erfurt, are all excellent sorts, but an extensive market gardener, who has raised these and all other sorts, believes that within 3 years the most enterprising market gardeners will have dropped these, and be raising Perfection. Trial package, 25 cts.; per oz., $4. Seed Catalogue **FREE** to every one.

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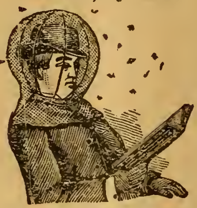
Price, by Mail or Express, $1.00.



There are five cross-bars united by a rivet through their center at the top These bars are buttoned to studs on the neck-band. The bars are of best light spring steel. The neck-band is of best hard spring brass. The cover is of white bobinet with black face-piece to see through.

It is very easily put together; no trouble to put on or take off; and folds compactly in a paper box 6x7 inches, by one inch deep The protection against bees is perfect—the weight of the entire Veil being only five ounces.

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The netting of a quantity of these Veils were **soiled by smoke.** These complete Veils we offer, postpaid, at **60 cents each, two for $1.10,** or **four Veils for $2.00.** They are practically just as good as ever, but slightly soiled. To secure these, **Order at once.**

We will send this Veil and the BEE JOURNAL one year, for **$1.50**; or we will give the Veil **FREE for two NEW subscribers** to the BEE JOURNAL—[or one for the BEE JOURNAL and two for the HOME JOURNAL] for one year, with $2.00 for the subscriptions.

THOS. G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

The New Tomato

From Canada ought to be extra early, and as such it is sent out. The reports of the experimental stations speak highly of it, and numbers testify to its earliness, productiveness, large size, roundness, rich color and freedom from rot. Per package, 15 cts.; five for 60 cts. You will find it only in my seed catalogue, which will be sent **FREE** to anybody.

J. J. H. GREGORY & SON, Marblehead, Mass.
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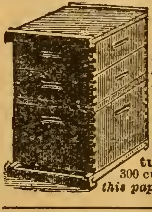

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The Dovetailed **Strongest, Best** and **Cheapest BEE-HIVE** for all purposes. Pleases everybody. Send your address to the **Largest Bee-Hive Factory in the World** for sample copy of **Gleanings in Bee Culture** (a $1 illustrated semi-monthly), and a 44 p. illustrated catalogue of **Bee-Keepers' Supplies.** Our **A B C of Bee Culture** is a cyclopedia of 400 pp., 6x10, and 300 cuts. Price in cloth, $1.25. ☞ *Mention this paper.* **A. I. ROOT, Medina, O.**

MUTH'S **HONEY EXTRACTOR**
PERFECTION
Cold-Blast Smokers,
Square Glass Honey Jars, &c.

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Mention the American Bee Journal.

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CIRCULATES
ALL OVER THE WORLD.
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVII. March 5, 1891. No. 10.

Editorial Buzzings.

The Rev. Stephen Roese, of Maiden Rock, Wis., has been "on the sick list" ever since January. *La Grippe* is the cause.

◆

There Will be No State Fair in Illinois in 1893, on account of the World's Columbian Fair, to be held in that year at Chicago.

◆

The Agricultural Society of Illinois has made a request for an appropriation by the Legislature of a million dollars for a suitable building at the World's Columbian Fair, and its management and care from the opening until its closing in 1893.

◆

The Editor of the American Bee Journal was, last week, unanimously made the first "honorary member" of the Illinois State Bee-Keepers' Association. This marked distinction is appreciated. We cannot undertake to do as much active work as formerly, but will do what we can for the furtherance of organized efforts generally.

◆

The Wisconsin State Bee-Keepers' Association, after we left the Convention at Madison, made us an "honorary member" of that Society. We appreciate the honor, and wish the Society continued prosperity. It contains many wide-awake and well-posted apiarists.

◆

The "Cold Snap," which commenced the day before the Springfield Convention, prevented many from attending, who otherwise would have been there. Among these we may mention Mrs. L. Harrison, the apiarist and noble woman of Peoria. We missed her wise counsel, her hearty grasp of hand and words of welcome, as well as her cheery smile and friendly advice.

◆

The Bee-World has added a cover to its second number, and dates it "March" —no February number having been published on account of the late start in January, and the present enlargement to 20 pages.

◆

Pages of Pictures of the Indian war, and the late Gen. Sherman's obsequies at St. Louis, are given in this week's issue of "Frank Leslie's Illustrated Newspaper."

◆

The Illinois State Bee-Keepers' Association decided to ask the Legislature to appropriate $5,000 for the collection and maintainance of a suitable exhibit of bees, honey, wax and apiarian appliances at the World's Columbian Fair. The committee to form the bill, and present its claims consists of the following :

Thomas G. Newman, Chicago.
Col. Charles F. Mills, Springfield.
Hon. J. M. Hambaugh, Spring.
Hon. John S. Lyman, Farmingdale.
C. P. Dadant, Hamilton.
A. N. Draper, Upper Alton.
S. N. Black, Clayton.

All other States should take similar action at once, so as to secure the appropriations in good time to command magnificent exhibits.

An Alliance of the different societies in each State, which are interested in agricultural pursuits is very desirable. Some States already have such in working order. Among these we may mention Indiana, Wisconsin, Iowa, Nebraska and Kansas. It is now in order to form such in Illinois and other States.

At the Convention in Springfield last week, Col. Charles F. Mills, Secretary of the State Board of Agriculture (who is also an apiarist and member of the State Bee-Keepers' Association), spoke at some length upon the desirability of forming such an Alliance, and presented some strong arguments in favor of its existence. He said that such an organization is now being formed here, under the name of "The Illinois Farmers' Club," and he wanted the bee-keepers to join and make a part of it. He also dwelt upon the advisability of a Farmers' Club, inasmuch as it was necessary that all branches of agricultural pursuits should be governed by meetings held by this Club. He also recommended the holding of joint sessions with the Agricultural and Horticultural Associations, whereby the views of each might be more satisfactorily and clearly defined.

At the conclusion of Col. Mills' address, we fully endorsed the project, and said it was something that we had long needed.

In Indiana, the State fosters all the agricultural pursuits, helps the State Societies to hold annual meetings, and publishes their reports in full.

Reduced railroad rates can always be obtained, and one journey is sufficient for those who are interested in several branches of agriculture, to attend all the meetings, as they are all held in one week at the Capitol, but on different days.

In the afternoon, the following preamble and resolutions were adopted, fully committing the Illinois State Bee-Keepers' Association to the project:

WHEREAS, The Agricultural Associations have been in favor of a movement looking to the organization of an association to be known as the "Illinois Farmers' Club," and composed of the live-stock and other associations of the State, and having for its object annual meetings for the promotion of the various industries represented; and

WHEREAS, The interests of all engaged in farming pursuits can be greatly promoted by such annual gatherings, held for the purpose of discussing all matters relating to agriculture; therefore, be it

Resolved, That the Illinois Bee-Keepers' Association hereby agree to cooperate with the agricultural organizations of the State, in holding a series of meetings in the month of December, 1891, at Springfield.

Resolved, That it is the sense of this Association that arrangements be made for holding the meetings of the respective organizations, composing the Illinois Farmers' Club, in the day time, and the mass-meetings, composed of all of the members of the several societies, be held in the evening, in the Hall of Representatives in the Capitol Building, during the continuance of the session of the Illinois Farmers' Club.

Thus it will be seen that the State Society and the Farmers' Club are the result of some work done last week at the Capital. We hope that the good effects of these organizations will be felt. as the years roll by.

The Farmers and bee-keepers of Newaygo county, Mich., have formed a very pleasant Alliance. This is as it should be, for their interests are identical, and their relations should always be harmonious. The following, from friend Hilton, comes just as we are closing the forms for this week:

> The Newaygo County Farmers and Bee-Keepers have just closed their fifth annual Institute, with 58 members. It was so full of interest that we could not complete our programme. In point of numbers, I think we excel any other State Association.
>
> GEO. E. HILTON, *Sec.*

An Improvement, Sure.

The AMERICAN BEE JOURNAL looks better than ever in its new dress. We had thought it as formerly, to be the "acme of perfection," but this new form and dress is an improvement, sure. and it comes regularly to its subscribers once a week.—*Rays of Light.*

Spraying Grapes.—At the late meeting of the Ohio Horticultural Society, President Campbell read an essay on new grapes. Following this, was an essay by Mr. Geo. W. High, a successful grape grower on the spraying of vines, to prevent mildew or rot, applying it just after blossoming, or when fruit is set, and two or three times more between then and the ripening of the grapes. The mixture consists of one pound of sulphate of copper, dissolved in three gallons of hot water, and, when cold, add one pint of the spirits of ammonia, then 22 to 25 gallons of water. He uses the Nixon spraying machine for the work.

Prof. Weed, of the Ohio Experimental Station, at Columbus, also recommended the spraying of fruit and other trees, with highly-diluted poisoned water (4 ounces of London purple or Paris green, to 50 gallons of water), for the destruction of insects injurious to fruit or foliage. He found it efficacious in the destruction (or driving away) of the curculio, as well as killing, without doubt, the codling moth, canker worm, and caterpillars.

Let it be remembered, however, that the spraying must not be done while in bloom, or it will be very harmful to the bees or other insects, while they are fertilizing the flowers, and thus increasing the quantity and quality of fruit.

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We Acknowledge a call from Mr. D. A. Fuller, the efficient Secretary of the Northern Illinois Bee-Keepers' Association. Mr. F. fully intended to be present at Springfield last week, but a sick wife prevented. Mr. F. is a brother to the Chairman of one of the Steering Committees of the Legislature, and the latter will aid our State Association to obtain the necessary appropriation for the Columbian Fair. Mr. D. A. Fuller has two more acquaintances in the Legislature, upon whom we can count for aid—making five in all, as a nucleus to sustain our claim for a respectable appropriation in order to make a grand exhibit at the World's Columbian Fair.

The Christian Woman, of Philadelphia, is an excellent home paper, and well deserves the patronage of all who desire to elevate the moral and intellectual standard of the human race. In its last issue we notice the following for which we make our best bow :

> The American Bee Journal for 1891 is improved in size, enlarged in the number of its pages, and is stored with information as good as the best honey, the cultivation of which its industrious editor is zealous to secure. No one can read this standard journal (the oldest publication of its kind) and not wish he could keep a colony of bees. But whoever tries to carry wishes into effect must make up his mind to be as industrious and persevering as the bees are.
>
> The employment is carried on successfully by women, and in many cases with great enthusiasm and delight. The reader will be surprised to see how large, important and increasing the honey-producing industry is. When we find apiarists talking of car-loads and tons of honey, we must try to comprehend millions of bees, miles and square miles of hives, and vast areas of flowers.
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> Locomotives will jump the tracks, ocean-racers will collide, live electric wires will kill the handlers, and bees will sting ; but all can be managed, and all will pay. The Bee Journal tells how the management in its specialty can be secured.

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Among the Telegraphic News in the daily papers, last Friday, we found the following item, in the list of corporations licensed at Springfield, on Feb. 27, 1891, to commence business under the laws of the State of Illinois :

> The Illinois State Bee-Keepers' Association, at Springfield ; to promote bee-culture ; without capital stock ; incorporators, P. J. England, J. A. Stone and A. N. Draper.

We drew up the incorporation papers before leaving the Convention hall, and this shows that the incorporators attended to the business ; and the State Association is now born, and fully recognized by law.

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Clubs of 5 New Subscriptions for $4.00, to any addresses. Ten for $7.50.

Wavelets of News.

The Live-Stock Men met in Springfield last Thursday, and resolutions were adopted asking the Legislature to appropriate $50,000 to be awarded in cash prizes for live-stock owned in Illinois and exhibited at the World's Columbian Exposition.

A bill was approved, and will be presented to the General Assembly, providing for at least the amount named, and that the State Board of Agriculture be instructed to apportion the prizes on the basis of 42 per cent. to breeding rings for horses, 25 per cent. to breeding rings for cattle, 15 per cent. for swine, 12 per cent. for sheep, and 6 per cent. for the standard varieties of poultry and pet stock.

A committee, of which the Hon. D. W. Smith, of Springfield, is chairman, was appointed to assist in securing the passage of the bill.

As the bees are not included in the above enumeration and apportionment, we must get our request for an appropriation for bees and honey in separately, or go without.

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Seasonable Hints.

Bees have not flown here in Central New York since Nov. 10, or during a period of about 95 days. As bees are natives of warm climates, where they can fly quite often, so as to avoid their excrement, this confinement is beginning to tell on them; some colonies are spotting their combs. If a chance to fly and empty themselves does not occur soon, diarrhea and loss will be the result.

Owing to the poor honey season of the year 1890, many colonies went into winter quarters light in stores, and on this account, it is well to look to them a little, to see that they do not starve. As long as sealed stores are seen in the combs, which the bees are clustered upon, they are all right. If none are seen, they should be fed, so as to make sure that they do not starve in some cold spell of weather when they cannot move about to get the few cells of honey which may be scattered about the hive, near the sides and elsewhere.

To best feed bees at this time of the year, set in some frames of sealed honey on any warm day when the bees can fly, or if such a day does not occur, remove a frame that has no honey in it, which is next to the cluster, and place one of the frames of sealed honey up against the bees. If no frames of honey are at hand, place some sections of honey over the cluster in such a way that they can cluster upon them, and thus lengthen out the limited supplies which they may have. If no honey of any kind is at hand, make a thick syrup of granulated sugar, and pour it into a comb while slightly warm, and set this comb of syrup in the hive the same as you would a frame of sealed honey. Another good way to feed at this time of year is to mix pulverized sugar and honey together, having both warm, and kneading in so much of the sugar that a stiff loaf is formed, similar to a loaf of bread before baking, when this loaf is to be laid on the frames immediately over the cluster of bees, on which the bees will subsist until warm weather. —G. M. DOOLITTLE, in *Rural Home.*

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Bees and Honey.

This book of 192 pages is not only a practical, exhaustive guide for those who handle bees, but it is full of interest and information for the general reader, especially the young. There are 237 illustrations. The author is Thomas G. Newman, editor of the AMERICAN BEE JOURNAL, Chicago, Ills.—*Children's Era.*

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Catalogues and Price-Lists for 1891 have been received from

Joseph E. Shaver, Friedens, Va.—40 pages—Supplies for Bee-Keepers.

G. K. Hubbard, Fort Wayne, Ind.—16 pages—Bee-Hives, Section Press, etc.

Thomas S. Wallace, Clayton, Ills.—6 pages—Bees and Queens.

Roe & Kirkpatrick, Union City, Ind. —8 pages—Apiarian Supplies.

J. B. Kline, Topeka, Kans.—24 pages —Supplies for Bee-Keepers.

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A Nice Pocket Dictionary will be given as a premium for only **one new** subscriber to this JOURNAL, with $1.00. It is a splendid little Dictionary—just right for the pocket. Price, **25 cents.**

Queries and Replies.

When Dividing, Where to Find the Queen.

Query 755.—In dividing a colony, in which position may I expect to find the queen, if I want to clip her wings?—Minnesota.

Let some one else answer this.—Mrs. L. Harrison.

I do not understand the question.—J. M. Hambaugh.

I do not understand this question.—Eugene Secor.

Anywhere among the workers in the brood-nest.—C. C. Miller.

Crawling on the combs, in the suspended-frame hives—.James Heddon.

You will want experience to guide you, in such work.—H. D. Cutting.

You may find her on one of the outside combs containing eggs, or any one between.—M. Mahin.

You will generally find the queen on the central combs, where she will be laying.—Dadant & Son.

In a standing or walking position. Possibly she may be found in a laying position.—A. B. Mason.

I do not understand the question. I would say, "Keep on the look" until you find her.—J. P. H. Brown.

The queen should be found in making the division: then it will be known in which part she is.—G. L. Tinker.

She will generally be found on the brood, unless from fright she runs beyond it, and most likely towards the center of the brood circle.—R. L. Taylor.

As far as I know, you will always find a queen standing on her feet, if she is good for anything. If that is not what you mean by "position," try to frame your question so that we can understand what you do mean.—G. M. Doolittle.

I do not understand this question. I find queens in all positions that they can take crawling; and to clip, it makes no difference what position she is in, for if the position she is found in does not suit, it can easily be changed. Be careful to clip her wing only.—J. E. Pond.

That depends very much on what preparation you have given the bees before opening the hive. If but little smoke has been used, and no drumming, you will likely find the queen quietly attending to her business on some of the center combs. If the hive was thoroughly stirred up, she will usually be found hiding in some corner, or up in the section-cases, if no queen-excluders are used.—C. H. Dibbern.

Your query is too indefinite to be answered to your satisfaction. When you look for the queen—if the colony has not been disturbed beforehand—the queen will be found on one of the combs containing brood or eggs. This is as near as the "position" of her whereabouts can be given. When I divide a colony I first hunt up the queen, and when she is found, I remove the comb she is on to a comb box. I then proceed to divide the colony, giving the queen to that part of the division that is moved to a new location, or you may give her to the one that occupies the old stand.—G. W. Demaree.

This query evidently should read differently. The word "position" ought to be *portion* or *part* of the divided colony, in order to make sense. We have tried to find the original copy, but have not been able to do so, as we do not now remember the *name* of the party sending it, and it was probably filed in our letter cases by the name of the writer.

Assuming the above to be the idea of the writer, we reply: When dividing a populous colony of bees, find the queen and put her into the new hive, placing bees and brood in the center; filling up with frames of comb foundation, removing the hive with the queen to a new location—leaving the queenless portion on the old stand, to rear for itself a queen, from the brood it possesses, if it has not already queen-cells in some stage of development. Then, of course, you "may expect to find the queen" just where you have placed her—in the new hive.—The Editor.

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The "Farm-Poultry" is a 20-page monthly, published in Boston, at 50 cents per year. It is issued with a colored cover and is finely illustrated throughout.

We have arranged to club the American Bee Journal with the *Farm-Poultry* at $1.35 per year for the two. Or with the Illustrated Home Journal at $1.75.

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Supply Dealers should write to us for wholesale terms and cut for Hastings' Perfection Feeders.

WINTER ENJOYMENTS.

What cheer is there that is half so good,
In the snowy waste of a winter night,
As a dancing fire of hickory wood,
And an easy-chair in its mellow light,
And a pearmain apple, ruddy and sleek,
Or a jenneting with a freckled cheek ?

A russet apple is fair to view,
With a tawny tint like an autumn leaf,
The warmth of a ripened corn-field's hue,
Or golden hint of a harvest sheaf ;
And the wholesale breath of the finished year
Is held in a winesap's blooming sphere.

They bring you a thought of the orchard trees,
In blossomy April and leafy June,
And the sleepy droning of honey-bees,
In the lazy light of the afternoon ;
And tangled clover and bobolinks,
Tiger-lilies and garden pinks.

If you've somewhere left, with its gables wide,
A farm house set in the orchard old,
You see it all in the winter-tide
At sight of a pippin's green-and-gold,
Or a pearmain apple, ruddy and sleek,
Or a jenneting with a freckled cheek.

—ST. NICHOLAS.

Topics of Interest.

Single-Walled Hives and Foul-Brood.

DR. G. L. TINKER.

There are a number of facts bearing upon the origin and prevention of foul-brood, that, it seems to me, should be considered at this time.

It appears to me that in all cold and damp countries, like England, Canada, and the northern part of this country, foul-brood prevails with greater virulence than in southern countries, since pretty much all of the reports of the prevalence of the disease come from the northern localities. If the history of foul-brood shall prove, as now seems probable, that it prevails mostly in northern climes, then we shall be warranted in suspecting that the cool and damp Springs of northern localities, by chilling the brood of weak or insufficiently-protected colonies, may lead to the invasion and development of the disease-germs that are now thought to be the cause of the malady.

At all events, the proof now seems conclusive that foul-brood may be, in a great many cases, traced to dead or chilled brood, in the Spring. If this shall prove to be true, the remedy of greatest concern to those bee-keepers whose apiaries are now free from the malady, is *prevention;* and that prevention will be found in proper protection and care of bees in the Spring, when most colonies are reduced in the number of bees, and brood-rearing is extended rapidly.

As a carefully protected colony will not be liable to chilled-brood, it seems to me that the first step in wiping out this disease, is to give the Spring protection, which has proved to be so advantageous to the bee-keeper in developing strong and vigorous colonies for the harvest.

If we are to have laws upon the subject, let us have one to compel bee-keepers who winter in single-walled hives in cellars, to protect their bees by suitable packing on setting them out in the Spring. Since cellar-wintered bees are not as vigorous and hardy in the Spring as those wintered out-of-doors, in protected hives, such a law would be particularly appropriate.

New Philadelphia, Ohio.

Fermentation in Honey—Trade-Mark.

G. W. DEMAREE.

The answers to Query 751, indicate that honey, in a very large portion of the country, is singularly exempt from the seeds of fermentation. Out of 18 answers, but 8 of them leave it possible to the mind that fermentation may take place in the flower cups, or in the combs, under certain conditions of weather, or electric changes. In fact, not more than 5 of the number speak sufficiently clear to indicate that they have had personal experience on the subject of the query.

I account for this in view of the fact that but few people, comparatively, are critically observant. Many persons speak of their honey as not "first-class;" "not as good as usual ;" or, "the honey is bad," etc., without observing the cause of the damage. Color alone is not always a safe indication of quality, especially as pertains to the wax capping. Thoroughly cured honey, when taken into the mouth, meets the palate without the slightest shock, and is exquisitely satisfying; but honey that has caught ferment, either in the flower cups, or in its thin form, while curing in the combs, gives a "twang" to the taste that is anything but agreeable.

There is something perplexing about atmospheric causes, as pertains to the flow, as well as to the quality of honey. In the Summer of 1883, known here as the "rainy, cold Summer," nearly all the honey stored by the bees was effected with ferment, and had a disagreeable, twangy taste. Most people pronounced it "sour." The season of 1884 was warm and showery, the nectar "flowed like a river," and there never was better and more enduring honey than was produced that season. I still have a sample jar of that honey; and it is as fine in flavor and color to-day as when it run from the extractor.

In 1886 we were scorched to a crust with drouth, and the bee-pasturage had the smell of fire about it, and that season my small crop of honey was damaged by fermentation.

Last season was rainy, attended by both extremes of cold and heat, and the bees gathered nectar rapidly, and the bulk of my honey crop was first-class in every respect.

It will be seen, from the facts given above, that no uniform condition of the weather, so far as common observation can discern, is attended with uniform results as to the quality of the honey produced.

The theory is that any abnormality in the weather, that either produces abnormal growth or premature decay in vegetation, is likely to effect the quality of the nectar, and make it susceptible of excessive fermentation.

When we take into consideration the fact that all good honey must receive, from the atmosphere, sufficient of the leaven of ferment to *reduce* the raw cane sugar, as we see it in good honey, we may well be surprised that honey is not injured more frequently than it is by excessive fermentation.

An interesting experiment, made last Summer with some honey that showed the presence of ferment, both by the bead-like bubbles, when the uncapping knife had laid bare the opened cells, and by its twangy taste, throws some light on the subject, to my mind. When feeding, to have unfinished sections completed, I took occasion to have some of the fermented honey rehandled by the bees, to learn, in a practical way, what change, if any, honey undergoes by passing to and from the honey sacs of bees.

I fed back almost 50 pounds of the fermented honey, and had two cases of sections completed. The sections looked as nice as any, but the quality of the honey was not altered in the least. The "twang" was as strong as ever, and when a bit of the capping was cut away, the little bead-like bubbles appeared from the cells just like they did when extracting honey. This experiment leads me to believe that the nectar sours in some cases before the bees gather it.

THE PROPOSED "TRADE-MARK."

From what I have written above, it will be seen that all the honey produced by the members of the Bee-Keepers' Union will never be of the same quality, and this fact alone puts the matter of a "trade-mark," as pertains to the *quality* of honey, entirely out of the question. Trade-marks are procured to protect peculiar forms of packages, and thus the purity of the article is made sure to the purchaser. But no staple article of commerce, itself, is patentable by trade-mark. The Bee-Keepers' Union, by becoming a corporation under State law, might adopt certain packages for honey, and protect them by trade-mark, but unless every package and its contents was inspected by a general manager of the corporation, the doings of the corporation would smell to the heavens before a single year expired.

Honey is not a manufactured article; it is a natural product, and no trade-mark—which, in fact, has the effect of a patent—would be worth the paper it was printed on, if the department was foolish enough to grant it.

I insist that no trade-mark can be made available to bee-keepers, except to protect honey in certain packages, and the packages must be such as is not in common use at the time the trade-mark is applied for. Of course, I speak of availability, not of law. If it was practicable for such a corporation, through its board of directors, to handle all the honey produced by the stockholders of the concern, it would give the corporation a chance to protect its good name, and save itself from dissolution. But the idea of a corporation doing business through all of its members, as individuals, in the name of the corporation, is as wild and visionary as is the proposition to procure a trade-mark on a natural product like honey. In my opinion the whole scheme is no better than a rope of sand.

Christiansburg, Ky.

Indiana State Bee-Keepers' Convention.

The 11th annual Convention of the Indiana bee-keepers met in Indianapolis on Jan. 16, and was called to order at 1 p.m. by President E. H. Collins.

After roll call, President Collins delivered his annual address, from which we make the following extracts :

"Knowledge of the details of bee-keeping we all agree to be the first requisite of success. Many defects many be discovered by the individual in his own yard, but the advantage of the experiments and success of others is immense. Many small bee-keepers continue plodding along with the crude knowledge and awkward blunders of the empiricist, and complain that there is neither pleasure nor profit in bee-culture. Such parties should avail themselves of the knowledge of others, and success would attend their efforts.

"The past three or four seasons have been discouraging ; much of our fruit and crops have been unsuccessful, the soil of the forest is less mellow than 50 years ago. These changes have seriously affected the flora.

"The drouth of 1888 and 1889 has so reduced the white clover that though it made a fine growth last Summer, it did not yield honey in proportion to the flattering prospects. The Fall rains came too late, and many bees are now starving. Yet those who fed last year came into June with strong colonies, and got paying returns.

"Statistics show that the number of colonies put into Winter quarters in the Fall of 1889 was 108,225 ; number on hand, 1890, 137,443 ; pounds of comb-honey, past 12 months, 936,676 ; pounds extracted, past 12 months, 107,714.

"The exhibit at the State Fair was the largest ever had, and I believe that, with one exception, all exhibitors were from Indiana.

"The single judge system is very popular, yet we desire a man who is well versed in bee-culture and all the modern appliances."

Mr. George C. Thompson, of Southport, next gave an object lesson with the hive, showing how to manipulate the brood-chamber, the use of the honey-board and section-case in securing comb-honey. This talk was very instructive, and was listened to attentively.

"Economy in Bee-Culture" was the next essay presented by Jonas Scholl, of Lyon's Station.

If your occupation is conducted properly, with good judgment and strict economy, it will give returns which will compare favorably with other industries. We must study the best methods for saving time, labor and outlay of money. We have too many patterns of hives ; we experiment too much, and waste money as well as time. We are putting too much money in the supply dealer's pocket. We must know what we want, and when we study economy, then we will find more profit in our industries.

Mr. Robert Scott, of Moorfield, read "Some Observations and Experiences of a Switzerland County Bee-Keeper."

The following essay by Walter S. Pouder, of Indianapolis, on "Management for Comb-Honey," was next on the programme :

Many people demand comb-honey because of its appearance on the table, and again, because, in their opinion, it is the only pure honey. In managing bees for comb-honey, there is certainly vast room for improvement, and while there is still room for improvement in managing for extracted-honey, it has been reduced to a more complete science. A good queen and proper Spring management are the main factors, to be followed by a good honey flow, and a pity 'tis that we cannot control the latter.

If we could accurately predict the honey seasons, we could build up accordingly; but how can we foretell ? No one knows but the man in the moon, and he refuses to be interviewed. Dr. Miller can answer the question, but his answer will be, "I don't know." Last season opened very promising, but the promise was one with a string tied to it. Then, let us build up strong, and predict a good honey season, for there is something about these predictions that kindle one's imagination into pleasant dreams.

For years I was an enthusiast on the subject of spreading the brood, but that enthusiasm has died away, and now it is my positive opinion that the bees will enlarge their brood-nest as rapidly as their abilities will permit ; but it is our important duty to see that the brood-nest is surrounded by an abundance of stores.

When the brood-chamber begins to be crowded, which will come about when there are from seven to nine combs of brood, we should simply add an upper story of ten brood-combs. These conditions will come about before the honey season has fairly begun, and the brood-nest will be extended into the upper box. We shall want just as much brood as we can possibly get, up to about May 25. When we lift off the upper box, see that the queen is safe in the lower chamber ; confined there by a wood-zinc honey-board, with an accurate bee-space on one side—the only honey-board that I should use in my own yard—and then return the extra box ; after a lapse of a week, we can extract without danger of throwing brood from the cells.

Colonies built upon this plan will become exceedingly strong, and we may have occasion to add an extra box of ten brood-combs. I have even been obliged to build a few of them four stories high. I have practiced this method for several years in a yard of 50 colonies. without a single natural swarm.

The best results with the extractor, are obtained after we have a good supply of combs. A full sheet of foundation will make the most beautiful comb, but is rather tender for the extractor; therefore, we must reserve as many of the tough combs from the brood-chamber as possible, and place frames of foundation in their stead, but if we are not careful the bees will make crooked combs from foundation.

We must place full sheets in the cluster, where an equal force can work on either side; one year's use for brood puts them in proper condition for the extractor.

To have combs touch the bottom-bar is certainly very desirable, and is best accomplished by trimming off the lower edge and then fitting in a strip of comb; patches of drone-comb can be replaced with worker-comb in the same manner, but these repaired combs must be given to the bees at a time when honey is coming in.

Now, if all the amateurs and experts would learn to extract at the proper time—that is, when the honey is thorthoughly refined—there would be a demand for the extracted-honey that would exceed the present good demand for comb-honey.

One of our city editors asks why extracted-honey is not as good as the honey that drips from the comb in a dish; one of our druggists complains that he purchased a can of extracted-honey from a farmer, and it soured. It is difficult for a beginner to know just when the proper time is to extract, because the seasons vary. At times it is sufficiently ripe without capping, and again it is unsafe to extract before it is thoroughly capped. My test in this matter has been that in shaking the bees from the combs, if I could shake any honey from the comb in the form of a spray, I would return that comb to the hive at once.

With a new extractor, good, movable frame hives, straight combs, queen-excluding honey-boards, a solar wax-extractor for an uncapping can, Italian bees, and a complete outfit of handy implements, it is not surprising that the amateur wants to turn that extractor.

Still, there are many that will not take hold of the implements that have reduced bee-keeping to a science; they will not read our excellent bee-periodicals, but still cling to the box-hives and hybrids, and in turn the hybrids cling to them.

"How far can the 'let alone' theory be successfully adapted in bee-keeping," was the title of an essay read before the Society, by R. S. Russell, of Zionsville. "All bees need care and management. Two-thirds of the mortality and bad luck in recent years, are traced to the door of the 'tinkerer,' or farmer, or the careless man. In regard to the wintering of bees, for Canada and the Northern States, small hives and cellars are safest; in our own States, large hives, well packed, are sufficient; while in Southern States, the 'let alone' theory is well enough."

Mr. Russell spoke at length in regard to the "let alone" theory, which was detrimental in nearly every case. "Success in bee-culture means that you must take care of them."

Election of officers resulted as follows: President, E. H. Collins, of Carmel; Vice-President, J. M. Hicks, of Indianapolis; Secretary, George C. Thompson, of Southport; Treasurer, Walter S. Pouder, of Indianapolis.

The following resolution was adopted:

Resolved, That the Indiana bee-keepers in session, indorse the principles of the bill to be presented to the present Legislature, now in session, entitled "An act to promote agriculture, manufactures, science and art in the State of Indiana, giving the different industrial associations a right to elect one member each."—*Indiana Farmer.*

Excluders for Comb and Extracted-Honey

JOHN H. MARTIN.

Perforated metal (zinc), as we now use it, was given to the public by the French previous to 1875, but did not attract much attention from bee-keepers until after 1881.

D. A. Jones first brought it to the attention of bee-keepers by using it as an entrance-guard and a queen-excluding division-board.

From its first introduction until the present time, its use has been gradually extending, until it has become an indispensable adjunct to the bee-hive.

There was not much advantage gained in using it for a honey-board, by simply laying a sheet of this metal between the upper and lower stories of a hive, but the invention of the slatted honey-board, with bee-space, permitted its use to great advantage. And this slatted honey-board, from its greater stiffness, and the insertion of strips of queen-excluding metal in the open spaces, seems to be the most satisfactory method of application.

I have always considered the ordinary honey-board, of whatever make, an obstacle to the immediate entrance of the bees into the supers, and have discarded them, placing the supers as near the brood-frames as possible.

My plan for working with the new queen-excluding honey-board, in the production of extracted-honey, is as follows:

In the first place, the hive has much to do with the proper manipulation of this honey-board, and to get the greatest amount of good from it with the least expenditure of time and vexation, I have adopted the new Heddon hive—divisible brood-chamber, thumb-screws and all.

In the Spring a colony should occupy two of these shallow cases, and if they do not, I put them upon one, and work them up into two as soon as possible.

Until the middle of June, or until white clover is in full bloom, I work to obtain brood, and not only have the two lower cases full, but much in the third.

When I wish the storing of honey to commence, I remove the upper cases, put on the queen-excluders and the extracting supers, and get solid combs of honey. From actual experience I know that the bees will store at least one-quarter more honey than where the queen has free access to all the cases.

If I have reduced the queen to only one case, I enlarge the brood-chamber by inserting another case below the queen-excluder at any time, preferably, toward the close of the harvest of white honey. The queen-excluder is kept below my extracting supers until I wish to remove them. I then remove the queen-excluding board, and insert a board with a bee-escape, and the next morning walk out with my wheelbarrow and wheel in the full cases, with scarcely a bee in them; and here I wish to say that the best escape I have thus far found is the invention of E. C. Porter, of Lewistown, Ills.

The Heddon hive, the queen-excluder, and the bee-escape, enable me to conduct an out-apiary with much less labor than with old methods.

The few colonies I have managed for comb-honey are manipulated in the same way. I reduce the brood to one case, and if there is any honey at all it goes into the supers in the most beautiful shape.

If I used an old-fashioned, out-of-date, hanging-frame hive, that necessitated the use of cumbersome and vexatious division-boards, the first thing I would do would be to split up the old things into kindling wood, and adopt something better.—*Read at the Vermont Convention.*

Apiarist's Work-Shop and Bee-Room.

E. L. PRATT.

I am building a bee work-shop, and have decided on the following plan: A plank cellar, 10x14x6, with one small light, on the south side; entrance through a bulkhead at one end. In this I shall keep all my heavy tools when not in use, and all restless nuclei, when making up during hot weather.

The building will be hip-roofed, set on posts, and, when finished, 6 feet and 6 inches. The first floor will be cut up into three rooms:

A work-shop, 8x10, containing a bench the long way of the room, a closet for foundation and other materials that should be kept out of the dust and dirt; racks and shelves enough to keep all hive parts separate and out of the way. Over the bench will be double sliding windows; at the right a large sash, and at the left a door to enter the bee-room.

In the bee-room I shall have a low and a high bench, with a double sliding sash at the right. Besides the entrance to the work-shop, there will be an outside door to the bee-room, wide enough to admit a man with a colony of bees.

The honey-room will be connected with the bee-room, and arranged as conveniently as possible for extracting, etc., with plenty of shelf and bench room. I have not designed this room as a storage room for honey.

The loft will be used for a catch-all. There will be one window in the gable-end.

The yellow Carniolans have become our favorite bees, because of their many good points. There are as many good points in this strain of bees as are generally found in two ordinary races. They are a long stride toward perfection.

They have the true traits of the Carniolan race, and are as yellow as gold. Besides being exceedingly gentle, they are great honey-gatherers. They winter well, and there is no doubt about their coming out well in the Spring.

As far as we have tested them, there can be no fault found. As "Rambler" said when he saw them: "They are remarkably quiet while being handled."

The queens are large and very heavy layers. We have not been troubled with over-swarming.

Beverly, Mass.

Trade-Mark—Illinois Convention.

JAMES HEDDON.

Since reading, in the AMERICAN BEE JOURNAL, the opinions of others, *pro* and *con*, regarding the advisability of securing from the Government a trade-mark for bee-keepers, I will come forward again, with your consent, Mr. Editor, with more thoughts upon the subject.

I notice in your issue of Feb. 12, something from Mr. Latham, also from Mr. John Burr, both of whom favor the trade-mark idea, and I am, also, not forgetful of a well-written article by some brother, one or two issues previously, who has as earnestly written upon the other side of the question.

Now, as I was the deviser and proposer of the scheme in the first place, and not at all certain at the time that it was the wisest or best course to pursue to accomplish the desired end—the thought coming to me in a moment while listening to the discussions at our Detroit Convention—I desire to again make the point, which seems not to be yet fully understood, viz., that the trade-mark scheme is of no use unless we start out for a "long haul," to use the terms of freighters. A catchy trade-mark—one which, I think, was well devised and described by a friend in a recent issue of the BEE JOURNAL—would soon become noticeable all over this country.

Following its appearance, undoubtedly, would be articles in nearly all the local and general newspapers. Ready-print houses, and stereotype plate concerns, would at once take it up, and very soon the whole people would be educated as to the meaning of the trade-mark.

A trade-mark of that kind, might consist, in part, of an explanation of it under the figure, so we may rest assured it would be understood everywhere.

As I said in a former letter, some one individual might take $40 of the funds of the Union, procure the trade-mark for 30 years, and then transfer individual rights, gratis, to all members of the Union—not only those now belonging, but to each person as fast as they join, and to continue in their possession as long as they remain members of the Union in good standing. To those who would not join the Union, it might be sold for a small price, to help pay expenses. It is not only a fact that "in union there is strength," but it will be seen that in this union, as in all that have gone before, there is economy.

The more I have heard on both sides, and the more I think of the project, the more I believe it will slowly and surely defend us against adulteration, which, I believe, is the object sought. I am firmly impressed with the belief that any arrests or suits, under State laws, against adulteration, will end in stirring up a smudge that will do us great harm. It will result in nothing but a false education of the people, with regard to the purity and worth of our special article of production.

If, after fully discussing it, the trade-mark problem shall be abandoned, I can conceive of nothing better than to keep still; and I have thought about the subject considerable.

I would like to say a few words concerning one feature which, I believe, will account in part for the surprising lethargy shown by some of the brothers in not joining the Union.

The point is directly referred to by Mr. John Burr, on page 229, and I hope, Mr. Editor, that, as Manager of the Union, you will act upon the same. Mr. Burr wants to know how the Manager is to find out whether or not litigation was winking one eye at the applicant at the time he applied for membership. That seems to me to be very easy. Every member who solicits aid from the Union in defense of his right, should send a sworn statement in regard to all his troubles, including just how and when they began. If that sworn statement gives the date of the beginning of the trouble prior to the date of his application, one of the rigid by-laws of the Union should make it illegal for the General Manager to give the Union's assistance.

If the Manager has any suspicion regarding the truth of the sworn statement, he should, at the expense of the Union, have a local attorney investigate it and report, when, if his suspicion proves to have been well founded, he should take the Union's money, in the interest of morality, and prosecute the perjurer.

Let us do business upon business principles. I consider this one of the vital points in the matter of securing memers for the Union. I may be mistaken, but at least I hope may not be misunderstood

THE ILLINOIS CONVENTION.

I have been much interested in the discussions in the BEE JOURNAL, with regard to the best location for holding the proposed State Convention of Illinois bee-keepers. As your broad State contains so many advanced apiarists who are deeply interested in the cause for which you meet, it seems to me that you should take all points into careful consideration.

Dr. Mason, of Ohio, is our Treasurer; not because he is noted as being honest enough to faithfully guard a large sum of money (say, from $4 to $8), but because we have come to look upon him as one of us, and so far nothing has ever occurred which made him a less worthy member because he lived in Ohio.

Now, there are a lot of us living in the suburbs of Chicago, as it were—down here in Michigan and Indiana, as well as a lot more in Wisconsin and Minnesota—who would like to meet with you, and we live in the same relation to Chicago that about half of the State of Illinois does. All this country may be compared to a funnel; Chicago being the point of discharge. No matter about the distance; everything readily seeks the center

Nearly every bee-keeper has some business that calls him one-half, two-thirds, or the whole of the way to this great metropolis, and there is no question in my mind in regard to the representation of Illinois bee-keepers alone, to say nothing of outsiders, if the meeting is held in the city of the coming World's Fair. Do you not think that is true, Mr. Editor? If you have expressed yourself, I have not seen it yet.

Dowagiac, Mich.

New York State Bee-Keepers' Convention

GEO. H. KNICKERBOCKER.

MORNING SESSION—JAN. 23, 1891.

President Elwood called the Convention to order, and then announced the following committees:

Columbian Fair—I. L. Scofield, O. L. Hershiser.

State Fair—I. L. Scofield, O. L. Hershiser, G. H. Knickerbocker.

Question Box—E. R. Root, W. L. Coggshall, G. H. Ashby.

Exhibits—Thos. Pierce, N. D. West, Chas. Stewart.

N. D. West then read an essay on Shallow *vs.* Deep Brood-Chambers, Narrow Spacing and Fixed Distances.

P. H. Elwood—I was very much interested in Mr. West's remarks, that if they do not build up as readily in the Spring, of what use are they?

I. L. Scofield—Where bee-keepers use ⅝-inch space, there will be burr combs, and a honey-board is necessary, but if only ¼-inch (scant) space is used, there will be only a very few burr combs, and no need for honey-boards.

D. H. Coggshall—I started with the Kidder hive, but afterwards made some Langstroth hives. The bees in the Langstroth hives came through the Winter in better condition, and built up much faster in the Spring; they produced more comb-honey, and were also better when I came to tier up for extracting.

I. L. Scofield—I have never used a larger frame than the Langstroth. My bees winter well, and I get as good yields of honey as my neighbors. Have never felt the need of a larger frame.

P. H. Elwood—We are using a large and quite deep frame, but not as deep as Mr. Hoffman, and some others, use. I have observed that bees do not winter as well in shallow frames. If I could get them to winter well, I should prefer them.

W. L. Coggshall — Experience has taught me that if you have a deep frame, you will have more honey above the bees, they will breed up better, and you will have a stronger colony. The key to it all is, there is not as much honey in the small frame.

P. H. Elwood—Many bee-keepers err in having the bees too short of honey in the Spring. They will not build up fast unless you have plenty of early forage.

O. L. Hershiser—Chaff hives are generally damp, and they do not dry out very readily. I have noticed that they winter better where they stand in the shade. I prefer hives with a dead air-space, or made as nearly so as possible.

B. E. Foster—I have kept bees 15 years, and prefer a shallow frame (Langstroth size). The only drawback with them is, that they do not hold enough honey, so that the bees will build up rapidly in the Spring.

G. H. Ashby—Why winter out-of-doors at all, when you can build a good bee-cellar for what it would cost to get outside cases? The bees will not consume more than half as much honey, when wintered in the cellar, and this saving of stores, also, will soon pay for the cost of the cellar.

P. H. Elwood—About 30 years ago Capt. Hetherington made 500 hives, with what is called a dead air-space, but they did not prove satisfactory, and he soon discarded them.

The Secretary then read an essay from Dr. G. L. Tinker, entitled, Are We Ready to Adopt a Standard for the American Italian Bee?

W. E. Clark—It seems to me as if a standard would be of but little value to any except queen-breeders, and those who exhibit bees at Fairs. The standard bees with me are those that give me the most honey.

O. L. Hershiser—I think there is great need for a standard, not only on the Italian bees, but on all the various races. At the Detroit Fair, last Fall, some were ruled out because they had more than three yellow bands, and it gave some dissatisfaction. If there was a standard established, we would have something to guide us, the same as the breeders of other stock have.

R. Bacon—I have had queens from many prominent queen-breeders, and have never, as yet, received any that produced more honey than my black and hybrid bees.

G. H. Knickerbocker—I think the point that friend E. R. Root made in *Gleanings*, some time ago, in regard to there being some Cyprian blood in the four and five-banded Italians, was well taken. The first bees of this strain that I had, originated in my yard, in 1886. I had, at that time, a colony of Cyprians, with the best imported queen that I ever saw. I controlled the drones with one of Alley's traps, but occasionally, when opening the hive, a few would escape. I feel very confident that this queen mated with one of these Cyprian drones, and the result was four and five-banded workers, and drones nearly all yellow. Since that time, I have had queens from at least two breeders, claiming to have the yellowest stock extant, and, with the exception of being a little more uniform in their markings, I could see but little, if any, difference. All have the glossy, transparent yellow on the underside of the abdomen, nearly the same as the Cyprians; they always cap their honey with the same water-soaked appearance, and do not enter sections as readily as the darker strains of Italians.

The Convention adjourned until 2 p.m.

AFTERNOON SESSION.

Convention called to order at 2 p.m.

The election of officers for the ensuing year resulted as follows: P. H. Elwood, President; I. L. Scofield, Vice-President; G. H. Knickerbocker, Secretary; Thos. Pierce, Treasurer.

President Elwood then delivered his annual address, from which the following is an extract:

"An investigation into the causes that promote the secretion of honey in flowers, I believe, would be not only interesting, but also profitable to us.

"It is commonly believed that when a bee-keeper sows and produces flowers, he has gone as far as he can in providing forage for his bees. I believe this to be a mistaken idea. When the subject is fully understood, I think he will go a step further, and seek to promote the secretion of honey in the flowers. It is now admitted that the primary purpose of this secretion is to allure insects to flowers, so that they may become fertilized.

"In the case of buckwheat, Mr. Quinby observed that a full crop of honey was usually followed by a good yield of grain, and conversely, that a short crop of honey was usually followed by a poor yield of grain.

"On a poor soil, or in a dry time, the plant may have sufficient vigor to furnish a fair amount of blossoms, but unless the necessary food or moisture is supplied at this time, the yield of honey and seed will be light. There will be no need of honey to secure a fertilization that cannot be matured.

"A study of this subject will convince any one that bees are highly beneficial and valuable to the fruit-grower and general farmer. A perfect fertilization is now held to be necessary to secure the greatest vigor in future generations of plants, while a fertilization not perfect is held to be a prolific cause of blasting, even after seed and fruit have formed.

"Mr. Cheshire says: 'I had 200 apples, that had dropped during a gale, gathered promiscuously, for a lecture illustration, and the cause of falling in every case but eight, was traceable to imperfect fertilization.'

"It has been suggested that the remedy for short crops is the management of a greater number of colonies with less work; or, in other words, out-apiaries are suggested. I do not believe that, for a majority of bee-keepers, the advice is good. When a small business does not pay, it is not usually advisable to extend it. Some other business, with bee-keeping, is advisable.

"The objection to this is that it is difficult to find any other occupation in which the busy time does not come when the apiarist is the busiest with his bees.

But, permit me to ask, if you establish out-apiaries, will not your busy time there conflict, or come at the same time, with your busy time at the home yard?"

Moved, by I. L. Scofield, that the address be accepted and ordered to be placed on file. Carried.

The Secretary then read an essay by Rev. W. F. Clarke, entitled, "What Constitutes a Good Bee Journal."

It was moved and seconded that we meet with the North American Bee-Keepers' Association at its next annual meeting, which is to be held in Albany.

The Committee on Questions then reported the following:

"Do fixed distances hinder rapid manipulation?" No.

"Does it pay to stimulate for brood-rearing by early feeding, and how is it best to feed?" Yes; if short of stores. Feed full combs of sealed honey.

"Do you believe in encouraging your neighbors to engage in honey production?" One replied, "I have, to my sorrow;" two say, "Yes, and no."

"How can I get the mice out of my bee-cellar?" Use strychnine.

"What kind of help do you employ; that is, skilled or unskilled, and why?" Skilled; it is cheaper in the end.

"What are the usual wages paid for experienced help in the apiary?" One-third more than for inexperienced.

"Do you make any of your own fixtures? Why?" Yes; it is cheaper.

"What is the best way of getting bees to work in section-boxes as soon as possible?" They will work in sections as soon as there are enough bees, and honey in the fields.

"What is the best method to prevent increase?" Give plenty of room and ventilation at the proper time.

"How much more extracted than comb-honey can be produced in an apiary?" Two say 25 per cent.; one says, 40 per cent.

N. D. West was then requested to give a description of his coiled-wire queen-cell protector.

Adjourned until 7:30 p.m.

EVENING SESSION.

The Convention was called to order at 7:30 p.m., with Vice-President I. L. Scofield in the chair.

The first essay was from F. B. Thurber, entitled, "The Influence of Free Sugar on the Consumption of Honey." It was read by Mr. C. H. Killmer, who represented the firm of Thurber, Whyland & Co. A vote of thanks was then extended to Mr. Thurber for his valuable essay, and it was ordered to be placed on file.

[Mr. Thurber's essay will be found on page 216, under the head of "Sugar, Honey, and the Tariff."—Ed.]

Then followed an essay from Mr. Henry Segelken, of the firm of Hildreth Bros. & Segelken, entitled, "What Our Market Demands," from which the following is an extract:

It is certainly to the interest of the producer to put his product on the market in the most attractive and salable style, and we, as sellers and distributors, are in a position to know the wants of our markets. Receiving comb-honey in large quantities from all the honey-producing centers, we get it in all shapes; and in many cases there is room for vast improvement.

In these days of sharp competition in all industries, it has been found necessary to put the goods on the market in an attractive shape. This is mainly the case with all kinds of food products, such as canned goods, preserves, etc., all of which are handsomely labeled, and those which are put up the neatest will find quickest sale. The consumer will always buy that which looks the most appetizing. As these facts cannot be denied of staple goods, it is all the more necessary to use the utmost care in putting up comb-honey in the most attractive style, because this is regarded a luxury—if not altogether, certainly to a very great extent.

We give credit to a large number of shippers, who are up to the times, and put their honey up in first-class shape. Their goods always find ready sale at the highest market prices; if they do not sell their product outright, they are sure of receiving returns within a short time, and need not fear having their honey carried for months, or carried over the entire season.

We very often receive comb-honey put up in bulky, awkward crates, not even glass on the sides of the crates; the combs built without separators, so that it is almost impossible to take them from the crate without injury. Such goods find very slow sale, and prices have to be shaded considerably to move them off. Still, these shippers generally expect highest prices, and are often dissatisfied and disappointed with the returns, when the fault lies with themselves only.

For a one-pound section we recommend a single-tier crate, holding 24 or 25 sections. While we are not opposed to the double-tier crate, we believe the former is most desirable—at any rate for unglassed honey. If some of the combs in an upper tier leak, they will drip over the bottom rows, and soil the whole crate.

For glassed or unglassed honey, we advise the use of heavy paper in the bottom of the crate, turned up about half an inch on the sides. If some of the combs should be broken down, this will prevent the honey from leaking through the crates. In addition, it is advisable to lay strips of wood of about ¼ inch in thickness on the paper, from side to side, for the combs to rest on. This will prevent the honey dripping from the broken combs from soiling the good combs. Of course, it is not necessary to go to this trouble when the honey is shipped in paper boxes.

"What part of the honey should be sent to market in paper boxes, glassed or unglassed?" Up to last year we have said, about one-third of each kind, as the demand was about equally divided. We now use 50 per cent. glassed, 30 per cent. paper boxes, and 20 per cent. unglassed, as near as we are able to estimate.

The reasons why glassed honey has the preference seem to be these: The retailer can take every comb from the crate and make a handsome display of it (this, of course, can be done with the paper boxes, but the glass will show the quality of every comb); the dust cannot settle on the honey; and the glass will prevent inquisitive and curious customers from sticking their fingers in the comb.

Another item of great importance, is to have the sections weigh not over one pound each, and less if possible. Our market demands light weights at all times, be the honey glassed, unglassed, or in paper boxes. Heavy sections are generally rejected, and we find it slow work moving them off.

We would call your special attention to the *grading* of the honey, which is as important a question as any of the former, and in which too much care cannot be taken. Very often we receive honey which is not properly graded, and where off-grades are mixed in with the first-grade, and marked No. 1 white honey. The outside combs will appear all right, but inside of the crate will be the poorer grade. We cannot take the trouble to open and examine every crate and comb, but have to rely on the shipper, and go by the mark and the appearance of the crate. We sell and ship the honey, and the first thing we know, the party who bought it will complain about the quality, and hold the honey subject to our order, and we must either have the honey shipped back to us, or make an allowance satisfactory to the buyer. This is certainly not very pleasant; it hurts our reputation, and we are apt to lose that customer. Not alone this, but the shipper is also dissatisfied, as generally he expects the highest market prices, and often will not admit that the honey was not properly graded, while no one but himself is to blame. All this can be avoided if the honey is properly graded.

Two grades of white honey are sufficient for our markets. For "fancy white," select only what *is* fancy white. For second grade, or "fair white," take combs that are stained, or a trifle off in color, and combs scantily filled around the edges. Any combs mixed with dark or buckwheat honey should not be put in with the second grade. Such honey cannot be sold for white honey, and will not sell for more than buckwheat. In fact, a straight buckwheat finds better sale than mixed honey. This should be crated by itself and marked "mixed" or "dark" honey.

Our market demands a limited quantity of two-pound sections. About 10 per cent. of the honey we receive is in two-pound sections, which is sufficient to supply the demand. They should be glassed altogether, and put in crates holding 12 or 15 sections.

The shipping of comb-honey should be by freight altogether. Some bee-keepers still seem to think that it must be sent by express only, believing it to carry safer. This is entirely wrong. Honey is carried just as safe, if not safer, by freight—at least, this has been our experience. Owing to the short crop last season, we received a large number of small shipments, ranging from 10 to 50 crates each, by freight, and we had but two or three lots which arrived somewhat broken down, and in one case the shipper wrote us afterwards that the honey had already leaked when he took it to the depot.

We re-ship in all-sized lots, often in single crates, and very seldom have a complaint. So far as the responsibility is concerned, all carriers—railroads, steamboats, and express companies—will take comb-honey only at *owner's risk*, and will not listen to any claim if the honey has been broken down while in transit. Why, then, pay the express company three times the rate of freight lines? We would advise shippers to load the honey in the cars themselves, properly protected. If this is done they may feel sure that the honey will arrive at its destination in good order, under ordinary circumstances.

Another point is, that honey should be shipped only in the original crates. We received one lot of honey from Central New York this season, where the shipper had crated six to eight original crates into one large crate. This, of course, was too heavy a package to be handled carefully, and, no doubt, received rather rough handling. The result was, that we received the honey all broken down, and the shipper was out 4 to 6 cents per pound on it. A sad lesson, indeed!

Last, but not least, "What is the right time to ship comb-honey to market?" We have always advised early shipping, say, during September and the first part of October. Our experience teach us that the early shippers obtain best prices, and get quickest returns, be the crop large or short. In all our experience we have *never* known the market to advance during November and December, but it usually declines as the season passes along.

A vote of thanks was extended to Mr. Segelken, for his able essay, and it was ordered to be placed on file.

C. H. Killmer—I heartily endorse all that Mr. Segelken has said; we are both in the same market, and the demands are the same.

I. L. Scofield said, in reply to a question, "We appreciate what Mr. Segelken has said, because he has told us what the consumers demand. We want a section that we can use with paper boxes, have glassed, or ship to market without glass."

H. Segelken—The condition of our market has changed from what it was a few years ago. The demand for glassed goods has increased during the past two years, so that we now advise that 50 per cent. of first-grade white honey be glassed. We believe that the demand for glassed goods will be permanent.

Chas. Israel—The increased demand for comb-honey glassed, is mainly on account of shipment. Consumers think it reaches them in better condition.

I. L. Scofield—Comb-honey will stand shipment better in paper boxes than in any other package. The paper acts as a cushion, and prevents the honey from breaking. For a number of years I have shipped large quantities, put up in that way, and seldom, if ever, have a comb broken if properly handled.

P. H. Elwood—We have to meet the demands of the market; but we, as bee-keepers, should be very careful about going to extremes. If we should all glass our honey next year, there would be a glut in the market, and the price would be lowered. The wisest thing to do, is to put a certain amount in paper boxes, and ship a certain amount glassed and unglassed. For example, a couple of years ago, the New York markets demanded unglassed sections, and nearly all bee-keepers sent it to market in that shape, or in paper boxes. The result was, there was a scarcity of glassed goods, and they brought a higher price.

O. L. Hershiser—No doubt, the trade changes in regard to size, and style of package, but it does not, or has not changed in regard to weight of sections. The demand has been for light weight for a number of years.

The subject of bee-escapes was then taken up.

C. H. Dibbern, of Milan, Ills., prepared an essay on this subject, but on account of a blunder of some postal clerk, it did not arrive in time.

G. H. Ashby—I have had a little experience with bee-escapes, and as far as that goes, they are a success. My apiary is located very near the highway, and sometimes the bees were troublesome to passers-by, but since using the bee-escape, I can take off every pound of both comb and extracted-honey without any disturbance whatever.

D. H. Coggshall—I smoke the bees, and shake out of the clamps or supers what I can get out handily, then stack them up in the bee-house, and put a small colony of bees (with a queen) on top, and by morning the bees will all be out of the sections.

Adjourned until to-morrow morning.

MORNING SESSION—JAN. 24, 1891.

The Convention was called to order at 9 a.m., by President Elwood.

The Secretary then read an essay from Samuel Cushman, of Pawtucket, R. I., on "Artificial Heat to Promote Brood-Rearing."

N. D. West—Nothing I have ever tried in the line of artificial heat, in or around the hive, to promote brood-rearing, has been of any value to me.

G. H. Ashby—I generally have no trouble to get the bees early enough, but for the last few years I have been troubled to get the honey. The flowers have secreted but little nectar, and we have had too many bees that are only consumers.

W. L. Coggshall—I have never experimented with artificial heat, but in early Spring, when we have cold nights, I take a basket of dry sawdust and sprinkle a handful at the entrance of each hive, this helps to keep up the temperature of the brood-nest, and the bees will open the entrance the next day as soon as it gets warm enough for them to fly.

The Secretary then read an essay by F. H. Cyrenius, on "New Uses of Queen-Excluding Zinc Boards."

N. D. West—We only have use for queen-excluding boards about ten days.

B. E. Foster—I have produced comb-honey for 15 years, and never have had occasion to use queen-excluders.

Wesley Dibble—We need queen-excluders when using a shallow frame.

G. H. Knickerbocker—I have boxed 25 colonies over shallow frames (half depth, closed-end Quinby) for the past two years. I had on hand a number of queen-excluders, but have had no occasion to use them. I box over 12 to 14 of these shallow frames, which are equal to six or seven of standard size.

U. Harmon—I use the Heddon hive, and have used but few excluders, and have never yet found any brood in the boxes. In hiving I give the swarm the two sections of the hive.

It was thought by several members that queen-excluders were necessary where not more than eight shallow frames were used.

The Committee on Exhibits then reported as follows:

B. E. Foster, Utica, N. Y.—Wire frame-lifter.

I. L. Scofield, Chenango Bridge, N. Y.—Scales for weighing colonies in the apiary. They have a broad platform, and are very good for the purpose.

M. E. Hastings, New York Mills, N. Y.—Tin pail bee-feeder; a good feeder for stimulating and feeding weak colonies.

G. H. Knickerbocker, Pine Plains, N. Y.—Queen nursery, which is very good.

C. W. Costellow, Waterborough, Me.—Cages for mailing queens; good.

F. H. Cyrenius, Oswego, N. Y.—Queen nursery and sample of Given comb-foundation; good.

Dr. G. L. Tinker, New Philadelphia, O.—Samples of his perforated metal, the workmanship of which was perfect.

W. E. Clark, Oriskany, N. Y.—Smokers, wood separators, honey-knives, one-piece sections, Quinby hive clasps, Van Deusen fasteners.

N. D. West, Middleburgh, N. Y.—Wire queen-cell protector, queen cages, bee-escape, and brood-frame with fixed distances.

Henry Segelken, New York City.—Samples comb-honey, in paper boxes and glassed sections.

J. Van Deusen & Son, Sprout Brook, N. Y.—Fine samples of flat-bottomed comb-foundation.

H. R. Wright, Albany, N. Y.—Honey kegs, crate of honey in glass pails; crate of honey in tin pails; and a crate of comb-honey.

Charles McCulloch, Albany, N. Y.—Two pictures, one representing a house built of honey, as exhibited by him at the New York State Fair in 1889, the other showing his exhibit at the New York and New England Fair, in 1890.

E. W. Philo, Half Moon, N. Y.—Machine for putting together and automatically gluing the one and four-piece sections.

O. L. Hershiser, Buffalo, N. Y.—Samples of very fine extracted-honey, in bottles and glass pails.

THOMAS PIERCE,
N. D. WEST,
CHAS. STEWART,
Committee.

After a short discussion of miscellaneous matters, the Convention adjourned for an informal meeting of the members before departing for their homes.

Hamilton County, Indiana, Convention.

E. H. COLLINS.

The Hamilton County bee-keepers met at Westfield, on Feb. 7. It was a dreary, nasty day, and we willingly accepted an invitation to take our lunch at Dr. Herr's and add a cup of hot coffee.

Mr. Frank Stonica, a student from Cincinnati, gave us some music, and with the music, warm dinner, hot coffee and a jolly crowd, the day passed very pleasantly.

A review of the lessons learned at the State Society was given by Mr. Cox, and others who attended that meeting.

It was held that the great cause of a light honey crop last year was weak colonies, caused by light stores from the previous dry Fall.

Various methods of feeding were carefully explained, and Hamilton county will have a better honey harvest next season, on account of the very interesting discussion.

Do not meddle with bees unnecessarily in the Winter. The vitality of thousands of them is low, and if disturbed, they die before the season is warm enough for young bees to take their place. No queen can be given at this time of the year.

If they are short of stores, you can place wax over the frames, or insert a comb of honey, but do not break the cluster; let them alone as much as possible until warm weather. Bees are reported in good condition.

The death of Dr. Brown, a member from Sheridan, was reported. The Doctor had several colonies of bees.

Only a fraction of the discussion is here reported.—*Indiana Farmer.*

If you have a desire to know how to have Queens fertilized in upper stories, while the old Queen is still laying below—how you may *safely introduce* any Queen, at any time of the year when bees can fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact, everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and is as interesting as a story. Price, bound in cloth, $1.00. For sale at this office.

CONVENTION DIRECTORY.

Time and place of meeting.

1891.
March 25, 26.—S. W. Wisconsin, at Lancaster, Wis.
Benjamin E. Rice, Sec., Boscobel, Wis.

March 10, 11.—Huron, Tuscola and Sanilac Counties, at Caro, Mich.
Jno. G. Kundinger, Sec., Kilmanagh, Mich.

April 1, 2.—Texas State, at Greenville, Texas.
J. N. Hunter, Sec.

May 6.—Bee-Keepers' Ass'n. and Fair, at Ionia, Mich.
Open to all. Harmon Smith, Sec., Ionia, Mich.

May 7.—Susquehanna County, at Montrose, Pa.
H. M. Seeley, Sec., Harford, Pa.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

North American Bee-Keepers' Association

PRESIDENT—P. H. Elwood....Starkville, N. Y.
SECRETARY—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

PRESIDENT—James Heddon ..Dowagiac, Mich.
SEC'Y AND MANAGER—T. G. Newman, Chicago.

Bee and Honey Gossip.

Dampening Sections.

On page 265 Mr. E. C. Eaglesfield gives his method of dampening sections, before bending, and asks if any one has a better way. I think I have. It is as follows: Lay a bale of 500 sections on the floor, and remove the cleats covering the grooves. Now take a teapot filled with hot water, and pour a small stream of water into each groove, then turn them over, and repeat the operation. By this method I can dampen 500 sections in 2 or 3 minutes. S. F. TREGO.

Swedona, Ills., Feb. 20, 1891.

Life-Members of the Union.

Could not more bee-keepers be induced to join the Union if it and the American Bee-Keepers' Association were consolidated? It seems to me to be a good plan, and one that that will prove advantageous. A life-membership fee of $10 would entitle them to more benefits, and at the same time more would be enabled to join. But this is merely a suggestion. J. W. TEFFT.

Buffalo, N. Y.

[We leave that to the members to decide.—ED.]

Not a Shadow of a Prospect.

Except that we are having sufficient rains to soak the ground thoroughly, so that white clover has a chance to grow from the seed, there will not be a shadow of a prospect for a white clover honey crop in this part of Iowa (Keokuk and surrounding counties) the coming season, as the great drouth of last Summer killed all the white clover on the upland meadows, and even the bottom lands make a very poor showing. Bees went into winter quarters here with very light stores, and swarms which had to build their comb, had no winter stores at all, and, as a result, are dying by wholesale. In this section of the country a bee-keeper has no chance to sell a colony of bees for a fair price, as farmers who secured a start of a little apiary by catching a runaway swarm, are selling prime swarms for 75 cents to $1 each. Of course, none of those fellows read a bee-periodical, and you cannot induce them to subscribe for one, but if you talk "bees," they know all about them, and more too. P. F. AHRENS.

Sigourney, Iowa, Feb. 20, 1891.

Salt for Bees.

A correspondent of the BEE JOURNAL writes that his bees are uneasy, and he thinks there are mice in the hive. In my opinion, the trouble is that he has not properly ventilated the hives. My bees are as quiet as kittens. I open both back and front entrance, and raise the top board about ⅛ of an inch. Once a week, I look into the bottom of each hive, and, with a bent wire, remove all dead bees. About two weeks ago I found that 2 colonies were dying, and when the dead were removed, they emitted a foul odor. I mixed some salt in a pint of clear water, and threw some of the water into the bottom of the hive, and the bees came down on the bottom-board, and drank the salt water, like so many cows would have done. Since then, I have given them a little of the salt water every few days, and but few dead bees are to be found now. We always give salt to our horses and cattle, and perhaps a little salt would be good for the bees. I am not in favor of wintering bees out-of-doors in this climate, when our cellars are almost invariably dry at that season. My house is 26x36 feet, and rests on a stone foundation 26 inches above the ground; my cellar is 12x16, and 7 feet deep, and the average temperature is about 38°. If the cellar is too warm, give the bees more ventilation in the hives. When the bees are uneasy, there is something wrong—as a general thing they are too warm. I think the belief is general among bee-keepers, that when the bees are snugly stowed away in the cellar, that it is not best to disturb them, as a great many think they eat more if you disturb them. This may be so, but there are thousands of colonies of bees that suffocate and die in the cellar, and out-of-doors, during the Winter, that would be all right if properly attended to. Bees require care and attention, as well as cattle and horses.

MARK D. JUDKINS.
Osakis. Minn., Feb. 16, 1891.

◆

Trade-Mark Injurious.

I think the trade-mark would be very injurious to all the bee-keepers in the United States. A label with the name and address of the bee-keeper on, is the best trade-mark you can find.

B. E. BROWN.
Prairie du Chien, Wis., Feb. 22, 1891.

[You are right about the trade-mark. It would be the most disastrous thing to the Union that could occur. The projectors of that idea did not think enough about it before suggesting the matter to the Convention. It would, in our opinion, be not only death to the Union, but it would serve a "death blow" to the pursuit as well. The unscrupulous, the dishonest, the adulterators, and the abominable nuisances who sophisticate in every community, would buy or steal it, and use it to the detriment of the pursuit.—ED.]

◆

Hopes for a Big Honey Crop.

In the Spring of 1890, I had 40 strong colonies of hybrid bees, but like many of my fellow bee-keepers, I ran a non-swarming, and as the sequel shows, a no-honey apiary, as my surplus only amounted to 250 pounds. My bees went into winter quarters in splendid shape, all in chaff hives, of my own contrivance. I always winter my bees on the summer stands, and have not suffered any loss for two years. Bees were flying nicely on Feb. 14 and 15. I am making arrangements for a good season, and hope for a big honey crop in 1891.

F. N. JOHNSON.
Knoxville, Ills., Feb. 16, 1891.

Bee-Keeping Under Difficulities.

Not long since a gentleman living in Coryell county, this State, suffered the loss of his house by fire, which was supposed to have been caused by an incendiary. A few days later, several colonies of bees were stolen from him, and excitement ran high in the neighborhood. Search was immediately instituted, and the hives were located near the dwelling of a man named Franklin. A number of the hives had been given a coat of paint, which had not yet dried when they were discovered. On searching Franklin's house, honey was found. Warrants being sworn out, Franklin and his son were arraigned before a Justice of the Peace, when they waived examination, and were placed under bonds of $500 each, to await the action of the Grand Jury. The accused bear a good reputation, but the evidence against them is very strong.

R. HOUSTON HENDERSON.
Killeen, Texas.

◆

Hope for a Better Season.

Bees have wintered well so far: and although the weather has been cold enough to confine them to the hives most of the time, it has not been cold enough to injure bees any, the mercury not having reached zero, at any time. We hope the coming season may prove a better one for honey than the season of 1890.

JOSEPH E. SHAVER.
Friedens, Va., Feb. 23, 1891.

◆

Bees, Not Honey.

The BEE JOURNAL comes all right, and I like to read it so well that I can scarcely wait for its arrival. I have never kept bees on a large scale, but have handled a few colonies each year, for several years. At present I have 11 colonies. At the close of last season I had 12, but one weak colony died. The rest are doing well, with plenty of honey in each hive. My queens have been laying for more than four weeks, and my colonies are largely increased by young bees. I keep them in the Simplicity hive, and wish to increase to 100 colonies this season, if possible. I know that if I make the increase, I will not get any surplus honey, but my object is bees, and not honey this season. My bees are hybrids, and are good ones, and I wish to keep them such. I wish, however, to use one tested Italian queen from which to furnish queens for all of my new colonies. Will some experienced bee-keeper tell me, through the BEE JOURNAL, the best method by which I can increase my 11 colonies to 100, and furnish them all with queens from one tested Italian queen?

N. A. ELLETT.

Augusta, Ky., Feb. 20, 1891.

Three Colonies in One Tree.

On page 764 of the BEE JOURNAL for 1890, is a letter from C. R. Smith, of Moorfield, Ind., relating the finding, by two boys, of a tree containing 2 colonies of bees. Two of our neighbors each found trees containing 2 colonies, and my papa has a tree with *three* colonies. My papa purchased a colony of bees for my birthday present, and it is my intention to become a bee-keeper. As soon as possible, I intend to subscribe for the BEE JOURNAL. I am 11 years old, a regular attendant at school.

MATTIE ROBY.

Chanute, Kan., Feb. 23, 1891.

Lost Through Neglect.

I cannot give a flattering account of my bees for the past year. For a few days, while the orchard was in bloom, the bees were working industriously, and breeding was going on rapidly; then came a change to cold, rain weather, and the bees were confined to their hives until almost starved. I was compelled to feed several of my colonies to save them, and my best colony was lost through neglect. The fact that a hive is overflowing with bees is not conclusive evidence that they are amply provided with stores, and when the brood are being thrown out in large numbers, it is best to make a thorough examination, and, if not too late, give the bees some warm sugar syrup through a good bee-feeder.

WILLIAM ROBSON.

Rolla, Mo.

Bending Sections.

Mr. Eaglesfield wishes to know (page 265) if any one has a better way to dampen sections than his own. I think there is a better, or, at least, much quicker, way to do it. Take a teapot filled with water, and pour the water through the grooves before the sections are taken out of the crate. Within two minutes you can have 1,000 sections ready to bend. But, why dampen at all? Keep your sections in an underground room, or place them in the cellar for a few days, and you will have little trouble from broken sections. I seldom break more than one in 500. No machine is necessary for bending sections. Two skillful hands, with ten nimble fingers, can put them up at the rate of 1,000 per hour, as I have often done, and putting them up any faster is needless; especially when one's whole crop seldom requires ten thousand.

F. GREINER.

Naples, N. Y., Feb. 25, 1891.

Painting Hives on the Inside.

I believe it is generally admitted that a colony of bees in a hive with damp walls is not in condition for successful wintering. If hives had one or two coats of paint on the inside, as well as on the outside, would not this difficulty be avoided? When the moisture came in contact with the walls, instead of penetrating them, as in the unpainted hives, it would run down and out of the hive, leaving the walls dry. Have any of the readers of the BEE JOURNAL had any experience in this direction? If so, I would be pleased to hear the result, and also to have the opinion of others as to the advisability of such a plan.

A. J. FISHER.

East Liverpool, O., Feb. 21, 1891.

CLUBBING LIST.

	Price of both.	*Club.*
The American Bee Journal	$1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Guide	1 50	1 40
Bee-Keepers' Review	2 00	1 75
The Apiculturist	1 75	1 65
Canadian Bee Journal	1 75	1 65
American Bee-Keeper	1 50	1 40
The 7 above-named papers	6 00	5 00
and Langstroth Revised (Dadant)	3 00	2 75
Cook's Manual (1887 edition)	2 25	2 00
Quinby's New Bee-Keeping	2 50	2 25
Doolittle on Queen-Rearing	2 00	1 75
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 60	1 50
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	2 20
Western World Guide	1 50	1 30
Heddon's book, "Success,"	1 50	1 40
A Year Among the Bees	1 50	1 35
Convention Hand-Book	1 50	1 30
Weekly Inter-Ocean	2 00	1 75
Toronto Globe (weekly)	2 00	1 70
History of National Society	1 50	1 25
American Poultry Journal	2 25	1 50
The Lever (Temperance)	2 00	1 75
Orange Judd Farmer	2 00	1 65
Farm, Field and Stockman	2 00	1 65
Prairie Farmer	2 00	1 65
Illustrated Home Journal	1 50	1 35
American Garden	2 50	2 00
Rural New Yorker	2 50	2 00
Nebraska Bee-Keeper	1 50	1 35

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☞ Subscribers who do not receive their papers promptly, should notify us at once.

☞ Send us *one new* subscription, with $1.00, and we will present you with a nice Pocket Dictionary.

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" 100 colonies (220 pages)	1 25
" 200 colonies (420 pages)	1 50

☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

The Convention Hand-Book is very convenient at Bee-Conventions. It contains a simple Manual of Parliamentary Law and Rules of Order for Local Bee-Conventions; Constitution and By-Laws for a Local Society; Programme for a Convention, with Subjects for Discussion. In addition to this, there are about 50 blank pages, to make notes upon, or to write out questions, as they may come to mind. They are nicely bound in cloth, and are of the right size for the pocket. We will present a copy for one new subscription to the BEE JOURNAL (with $1.00 to pay for the same), or 2 subscribers to the HOME JOURNAL may be sent instead of one for the BEE JOURNAL.

◆

A Word of commendation from our readers to those not among our subscribers, will be more potent than anything we can say. If you like our JOURNAL—please let your neighbor know it, and let us thank you in advance for this favor.

◆

Subscribers whose time does not expire for some months can safely renew at any time, without fear of loss, because we always extend the time from the date of expiration on our books. If you want any other magazine or newspaper, we can furnish it, and save you money by clubbing it with the BEE JOURNAL. See our list of a few of them on page 328.

◆

Bee-Keeping for Profit, by Dr. G. L. Tinker, is a new 50-page pamphlet, which details fully the author's new system of bee-management in producing comb and extracted-honey. and the construction of the hive best adapted to it—his "Nonpareil." The book can be had at this office for 25c.

◆

Binders made especially for the BEE JOURNAL for 1891 are now ready for delivery, at 50 cents each, including postage. Be sure to use a Binder to keep your numbers of 1890 for reference. Binders for 1890 only cost 60 cents, and it will pay you to use them, if you do not get the volumes otherwise bound.

◆

Only a Few complete volumes for 1890 are on hand. If any one desires to have a full set of numbers for binding, they should be sent for soon.

HONEY AND BEESWAX MARKET.

DETROIT, Feb. 28.—Comb-honey is quoted at 14@15c; demand light. Extracted, 7@8c. Beeswax in fair demand, 27@28c.
M. H. HUNT, Bell Branch, Mich.

NEW YORK, Feb. 28.—The market is bare of comb-honey. We quote: Extracted, buckwheat, 7@7½c; California, in good demand, at 6¾@7¼c, and market well supplied; Southern, none in market. Beeswax, 25@27c.
HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

KANSAS CITY, Feb. 28.—The receipts of comb-honey are very light: our market will be well cleaned up by March 15. We quote: White 1-lb. comb, at 16@18c; California white, 2-lb., 14@15c; extracted, 6@7c. Beeswax, 22@25c.
CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CINCINNATI, Feb. 28.—Demand is good for all kinds of honey, with a good supply on the market of all but Southern honey, which is scarce. Choice comb honey brings 16@17c per pound. Extracted honey, 6@8c.

Beeswax is in good demand at 24@26c., for good to choice yellow. C. F. MUTH & SON,
Corner Freeman & Central Aves.

CHICAGO, Feb. 28.—Demand at present not very active on comb honey. Fancy white, 17c; white, 16c; white, 2-lb. sections, 14c; buckwheat, 1-lb. sections, 12c; extracted, 7@8c. Beeswax, 28c.
S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, Feb. 27.—Fancy white 1-lb. comb, 18c; fair to good, 17c; dark 1-lb., 14@15c; 2-lb. white comb, 15@16c; 2-lb. dark, 13@14c; extracted, white, 7c; dark, 5@6c.
HAMBLIN & BEARSS, 514 Walnut St.

CHICAGO, Feb. 28.—The volume of trade in honey is very small. A few of the best lots are taken at 17@18c; but where the condition and appearance of honey is a little off, 16c is about the top. The supply is not large, but there seems to be about enough for the trade. Extracted, is selling at 7@8c, with fair trade.

Beeswax, 27@28c.
R. A. BURNETT, 161 S. Water St.

BOSTON, Feb. 27.—Honey is in fair demand; supply short. Fancy, 1-lb. comb, 19@20c; fair to good, 18@19c; 2-lb. sections, 16@17c. Extracted, 8@9c. There is no beeswax on hand.
BLAKE & RIPLEY, 57 Chatham Street.

ALBANY, N.Y., Feb. 28.—The honey market is slow and unsatisfactory, stocks of comb-honey being light and prices unchanged; stock of extracted increasing. We are selling white at 16@18c; mixed, 14@15c; dark, 12@14c. Extracted, white, 8@9c; dark, 6@7c. Beeswax, 26@30c.
H. R. WRIGHT, 326-328 Broadway.

We Club the American Bee Journal and the Illustrated Home Journal, one year for $1.35. Both of these and Gleanings in Bee Culture, for one year, for $2.15.

Supply Dealers desiring to sell our book, "Bees and Honey," should write for terms before issuing their Catalogues

Clover Seed.—White Clover Seed has declined, and Alsike has advanced. The price of either seed will be 25 cents per pound; $2.50 per peck; and $9.00 per bushel, until further notice.

Convention Notices.

☞ The Southwestern Wisconsin Bee-Keepers' Association, will hold its next Convention in the Court House, at Lancaster, Grant Co., Wis., March 25, 26, 1891. All who are interested in bee-culture and convention-work are cordially invited to attend. The topics for essays and discussions are enumerated on page 183.
BENJAMIN E. RICE, Sec., Boscobel, Wis.

☞ The 13th annual session of the Texas State Bee-Keepers' Association, will be held at Greenville, Hunt Co., Texas, on April 1, 2, 1891. All interested are invited. J. N. HUNTER, Sec.

☞ The Huron, Tuscola and Sanilac Counties Bee-Keepers' Association, will meet in convention at Court House, at Caro, Tuscola Co., Mich., March 10, 11. All interested are cordially invited to attend, as it promises to be one of the best meetings the Association ever held.
JNO. G. KUNDINGER, Sec., Kilmanagh, Mich.
H. E. GORDON, Pres., Unionville, Mich.

☞ The 8th semi-annual meeting of the Susquehanna County Bee-Keepers' Association will be held at Montrose, Pa., on Thursday, May 7, 1891.
H. M. SEELEY, Sec., Harford, Pa.

Wants or Exchanges.

Under this heading, Notices of 5 lines, or less, will be inserted at **10 cents per line,** for each insertion, when specially ordered into this Department. If over 5 lines, the additional lines will cost 20 cents each.

WANTED—To exchange 1-lb. thin Vandervort f'd'n for 2 of wax. Samples and testimonials free. C. W. DAYTON, Clinton, Wis.
8A10t

WANTED—To exchange Strawberry Plants for Poultry, or other leading varieties. Address, DOUGLASS BROS., Hamburg, Mich.
9A1t

FOR SALE—40 colonies of bees, $3.00 per colony, aboard cars, all in Langstroth hives, painted. Will ship from 1st to 15th of April, 1891. Am going South.
9Atf L. REED, Orono, Osceola Co., Mich.

WANTED—To sell 50 22-pound Pails of Basswood Extracted Honey, by A. C. SANFORD, Ono, Wis. 10A1t

FOR EXCHANGE—One 10-inch Foundation Mill, new; will exchange for Bees by the pound, and Foundation.
10A2t L. L. ESENHOWER, Reading, Pa.

WANTED—Names of bee-keepers who want Honey Plant Seeds. G. M. WHITFORD, Arlington, Nebr. 10A1t

WANTED—You to see my advertisement in another column, if you are interested in Honey. H. L. PANGBORN, Maquoketa, Ioa.
10A1t

HANDLING BEES

A **PAMPHLET,** treating of the taming and handling of bees. Just the thing for beginners. It is a chapter from **"The Hive and Honey-Bee, revised."** Price, 8 cts. Advice to beginners, Circulars, &c., free.

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A. A. WEAVER, Warrensburg, Mo.
6A13t

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On and after Feb. 1, 1890, we will sell our No. 1 V-groove Sections in lots of 500 as follows: Less than 2,000 at $3.50 per thousand; 2,000 to 5,000 at $3.00 per thousand. Write for special prices on larger quantities. No. 2 Sections $2.00 per thousand. Send for Price-List for other Supplies. Address,

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(Successors to B. J. Miller & Co.)
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6A26t

Mention the American Bee Journal.

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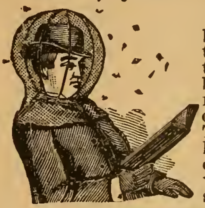

There are five cross-bars united by a rivet through their center at the top. These bars are buttoned to studs on the neck-band. The bars are of best light spring steel. The neck-band is of best hard spring brass. The cover is of white bobinet with black face-piece to see through.

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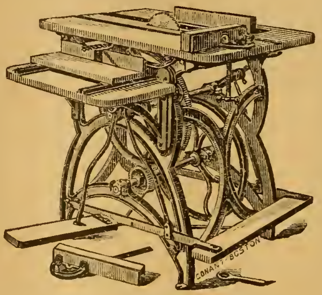
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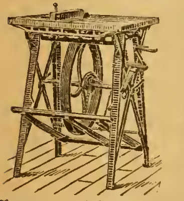

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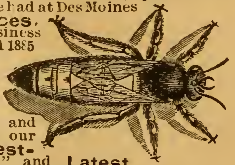

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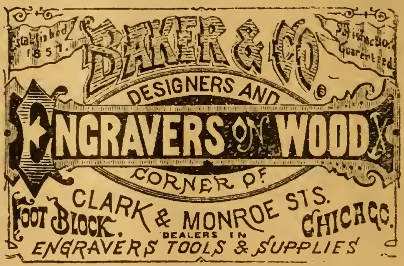
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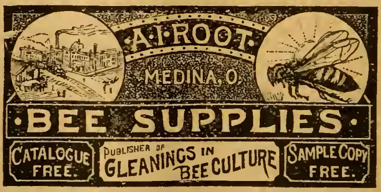
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THOMAS G. NEWMAN,
EDITOR.

Vol. XXVII. March 12, 1891. No. 11.

Editorial Buzzings.

A. G. Baldwin, of De Kalb, Ills., was prevented by sickness from attending the Convention at Springfield on Feb. 26. We regret to learn that he was "confined to the house during the whole week."

Another bee-keeper has been found in the Illinois Legislature. Mr. Smith, Representative from Macon county. He intends to support a bill to prevent the spreading of foul-brood, which the Hon. J. M. Hambaugh will present in a few days. He will also help us to get the $5,000 appropriation.

J. B. Mason, of Mechanics Falls, Me., has "fallen from grace." He was "a pillar in the church," and a loud-mouth advocate of social reforms. But, alas, in an evil hour, he gave way to temptation, and decamped with "another man's wife"—going to "parts unknown," leaving a wife and family to mourn his absence. Why, we know not.

The Fruit Growers of Tulare county, Calif., have presented a petition, signed by 77 taxpayers, to the Board of Supervisors, asking for an ordinance prohibiting the keeping of bees in that locality. If the Supervisors are *green* enough to pass the ordinance, it will avail nothing. Bee-keeping is a lawful vocation, and cannot be prohibited. Bee-keepers have rights under the Constitution of the United States, which must be respected everywhere within the borders of Uncle Sam's domains! Besides, the bees are the best friends to fruit-growers, and they are making a sad financial mistake.

The Second Annual Convention of the Eastern Iowa Bee-Keepers' Association was held at Maquoketa last month, and was a very successful one. The Secretary, Mr. Frank Coverdale, when sending the report (which may be expected in our next issue), writes: "Our meeting was a very busy one. So great was the interest in the discussions, that some of the essays had to be carried over until our next annual meeting."

Our Friend Viallon has been sadly bereaved. He did not answer the last lot of Queries we sent him. We wrote to him, and sent another copy. The following letter will tell the reason:

> You will have to excuse an unfortunate one, who took his wife to her last resting place on the 3d inst., for not answering the Queries you sent him. My wife had been suffering from heart disease for several years, although she was in tolerably good health; about three months ago *La Grippe* took her and brought on a complication, and she quietly died on March 2, in her 49th year. On the 7th of last August we celebrated the 25th anniversary of our marriage, not expecting the end to be so near, but such is the will of Providence. Yours in grief,
>
> P. L. VIALLON.
>
> Bayou Goula, La., March 5, 1891.

We deeply sympathize with friend Viallon in his sad bereavement, as will our readers who have been perusing his replies to Queries for years.

The World's Columbian Fair.

The Illinois State Bee-Keepers' Association, decided to ask the Legislature to appropriate $5,000 for the collection and maintainance of a suitable exhibit of bees, honey, wax and apiarian appliances at the World's Columbian Fair.

The committee to form the bill, and present its claims, being:

Thomas G. Newman, Chicago.
Col. Charles F. Mills, Springfield.
Hon. J. M. Hambaugh, Spring.
Hon. John S. Lyman, Farmingdale.
C. P. Dadant, Hamilton.
A. N. Draper, Upper Alton.
S. N. Black, Clayton.

All other States should take similar action at once, so as to secure the appropriations in good time to command magnificent exhibits.

For the benefit of Committees in different States, who will have to present the matter to the Legislatures, and ask for appropriations, we will here reply to a question which has been propounded to us and others scores of times. That question is—

WHAT IS THE MONEY NEEDED FOR?

The answer is easy. It is needed to procure, transport, organize, and take good care of exhibits, and may be particularized thus:

1. To pay a competent person for time and diligent work for a year, or more, to procure, arrange, and superintend an exhibit which shall be a credit to the State.

2. He will need many assistants during the entire time of holding the Columbian Fair, to care for and protect from damage or waste, the many articles exhibited, as well as to keep them clean and in proper condition for thorough examination by the millions of visitors. These must be efficient persons, and will have to be suitably paid.

3. Products of the apiary, machinery and appliances will have to be transported to the Fair Grounds, and this will entail considerable expense.

4. We do not desire a separate building for the industry of bee-keeping, but it will be necessary to *fit up a large space* in one of the principal buildings devoted to agriculture, horticulture or floriculture. To make it convenient, and have it attractively decorated. will cost money, but it will be well spent, nevertheless, for the general verdict, at all Fairs, is that the Bee and Honey Department is the most attractive thing on the Grounds.

5. At the close of the World's Fair all the goods exhibited must be carefully packed and returned to the owners. This item of expense for labor, material, drayage and railway transportation will be very large on account of the care required in handling and packing, so as not to destroy the values. Honey in the comb (in all forms and shapes imaginable) is delicate and fragile, and the utmost care will be required to prevent its being damaged or ruined entirely.

6. And last, but not least; cash prizes, medals and diplomas will of necessity be required to bring out an exhibit, which will honor the State. This item must necessarily be a large one, for upon it will depend the success of the entire undertaking.

These are a few of the things that will require money, and for which a liberal appropriation is desired from the public Treasury.

A good superintendent, manager, organizer and financier is required to take full charge of the Apiarian Department, and make it a success. The North American Bee-Keepers' Association, in annual convention assembled, at Keokuk, Iowa, by unanimous vote requested the appointment of Dr. A. B. Mason, of Ohio, to that important office for the United States, and Mr. R. McKnight for Canada. With their experience at Fairs, and efficient management of large exhibits, we may confidently expect a grand success.

There is not much doubt now, but that Dr. Mason will receive the appointment of Superintendent for the United States apiarian exhibit. The following letter from him on the matter will be read with interest:

> We need money to pay the expense of exhibits. No one will send honey and beeswax just for the "fun of the thing." I would not send 500 or 1,000 pounds of honey put up in glass, and pay all, or any of the expense, and run the risk of loss, for nothing but *glory*; and no one will put up, and care for, an exhibit by a State, for seven or eight months for nothing. Of course, whoever sends honey will be out of the use of that amount, and we must secure generous appropriations in order to procure a display which will be creditable. A bill is now pending, appropriating $100,000 for our Ohio State exhibit. The Michigan bee-keepers expect to get an appropriation also.
>
> I am not in favor of a separate building for the honey exhibit. We want it to be located where everybody will be *obliged* to see it. Many are not enough interested in honey to go out of their way to see it.
>
> I wrote Mr. W. J. Buchanan, chief of the Department of Agriculture, giving my ideas in regard to the assignment, and have now before me his reply. I believe he understands his business. I intended to have written an article before this, giving the substance of his first letter and my reply, but my "indisposition" (which, by the way was not *La Grippe*), and being so busy, has prevented. I am just getting so that I can walk off spry again. A. B. MASON.

We are very glad that Dr. Mason is getting over his indisposition, and hope to have him at his best during the World's Columbian Fair, and that in all his coming years its memories may be his "crown of glory."

◆

La Grippe is no respector of persons or places, it seems. Quite a number of our prominent apiarists have had it this year. There is one consolation, however, and that is it is milder in form than it was last season. Many have it, but there are only a few deaths now attributable to it. It leads to pneumonia and pleurisy, and these often prove fatal. Some persons imagined that having had it last year, they would not be likely to have it this season; but such is a mistaken idea.

Not Guilty.—Last July we stated, on pages 443 and 467, that Mr. N. N. Betsinger, a prominent bee-keeper of Marcellus, N. Y., had been tried for immorality, and was sentenced to the penitentiary for 15 years. He asked for a new trial because a conspiracy had been formed against him, and protested his innocence of the charges. The new trial was granted, and has just been concluded, as we notice by the Syracuse *Herald* of March 2, kindly sent to us by Mr. F. A. Salisbury. The jury were out four hours, and upon their return to the court room, rendered a verdict of "not guilty." The *Herald* says:

> For a moment, Mr. Betsinger seemed as though he scarcely realized the full meaning of the foreman's announcements. Then, with bent head, and hands clasped to his eyes, he broke forth in a torrent of tears; and a little later, in a voice choked with sobs, he rose to his feet, and uttered a fervent "God bless you" to the jury, as they were leaving their seats. He threw himself at last on his mother-in-law's breast, and, with his arms clasped about her neck, wept like a child, while the aged woman joined her tears with his.

Last year, after noting Mr. B.'s protestation of innocence, we made this statement: "If he is innocent, we hope that it will be so proven—that the right may prevail." It is a source of much comfort to be able to state the fact, that his innocence is now fully established. The second trial was before the same Judge (Northrup), and was conducted by the same lawyers; but a year had cooled off an excited public opinion, caused by the false statements of two little girls, probably instigated by a meddlesome neighbor, who was doubtless prejudiced against him for some cause or other. The ordeal has been a terrible one for Mr. Betsinger, but we are pleased to be able to state that he is completely vindicated.

◆

We are Sorry to state that Mr. Macpherson, associate editor of the Canadian *Bee Journal*, fell on the ice 2 weeks ago, and severely injured his head.

Bees and Berries Go Together.—The following from the *Farm Journal*, of Philadelphia, last week, is commended to the attention of horticulturists who wage a foolish warfare against the bees. In their ignorance they are persecuting their best friends. Here is the item:

> Some years ago, a friend who is a great lover of strawberries, located in an unsettled part of a Western State; and as soon as he could get the soil into proper condition, set out a large bed of several varieties. As it happened, every-one of them were pistillate, but he did not know the difference. The next Spring the plants were white with bloom, but not a berry did he get. He wrote me a long, doleful letter, blaming the soil, climate, etc., and asking me what he should do. "Do wild strawberries grow there, and are there any honey-bees in the neighborhood?" I asked. "Plenty of wild strawberries, but no bees within 15 miles," he replied. I told him to get a colony of bees, cultivate his berry patch well, and I would guarantee him a full crop the following year. He did so, and sure enough the crop was there. He gathered over 20 bushels of magnificent berries.
>
> Plant alternate rows of pistillate and perfect flowering varieties, and shut off the bees, and the pistillates will set one-third to half a crop.
>
> Plant the pistillates in one bed and the perfect varieties in another, and have plenty of bees about, and you will harvest a full crop from both. Bees will work whenever the weather is such that pollen will develop, and they will carry it to every blossom. Bees and berries go together. FRED GRUNDY.

◆

Bees are Now consuming considerable honey in brood-rearing. The Indiana *Farmer* says:

> So far, the Winter has been very pleasant, and bees are in fine condition, but do not forget that the bees will consume more stores from now until fruit-bloom than they have consumed in the past five months. A few pieces of candy, made of coffee A sugar, placed over the frames beneath the cloth, will do wonders for colonies that are about to become destitute of stores.
>
> A great many bees die every year leaving the hives full of nice worker comb, which, as a general thing, is torn out and worked into wax. This is a great mistake, for every scrap of comb, if only two inches square, can with a little skill, and a few pieces of wire, be transferred to frames, and profitably used again. We pay from 45 to 65 cents per pound for foundation to assist the bees, and old comb is worth equally as much for the same purpose. By having a hive full of comb to give to swarms, they are ready to store surplus immediately, when otherwise it would take them more than a week to fill the brood-chamber. With plenty of comb or foundation, one can increase the colonies to an almost unlimited extent.

◆

Mr. Cowan's new books have arrived, and our orders are all filled. When noticing the book, on page 109, we placed the price at 75 cents, but after getting them, we find that it is too low. The transportation, duties, etc., make them cost us more than that amount. The price will hereafter be $1.00 post-paid, and it is a cheap book at that price, for it is beautifully printed, illustrated and bound. The subject matter is the natural history, anatomy and physiology of the honey-bee, and the author's treatment of the subject is *new*, and highly interesting. It should be in every bee-keeper's library.

◆

Honey for La Grippe.—Mrs. Mary W. Loun, of Coin, Iowa, sends us the following, which she recommends, after using it in her own family:

> Take horehound, mullein, hops, and wild cherry bark, of each 1 ounce; put into 1 gallon of water, boil till reduced to 1½ pints, and strain; add 1½ pints of honey, and boil down to 1 quart. Dose, 1 tea-spoonful 3 or 4 times a day for an adult, less for children, according to age.

◆

Catalogues and **Price-Lists** for 1891 have been received from

J. Wes Clark, Clarksburg, Mo.—8 pages—Bees and Bee-Hives.

F. M. & S. E. Atwood, Rileyville, Ills.—16 pages—Bees, Hives and Supplies.

J. D. Goodrich, East Hardwick, Vt.—12 pages—Apiarian Supplies.

Henry Stewart, Prophetstown, Ills.—20 pages—Bee-Keepers' Supplies.

Queries and Replies.

Noxious Weeds in an Apiary.

QUERY 756.—I am troubled with crab grass and weeds growing all around and over my hives, which are in a bearing peach-orchard. While the bees were quiet on cool days, I have plowed the ground between the rows, and intend to "fork" around the trees and hives, as it is no easy undertaking to keep the grass hoed out during the growing season, which, with us, is from April to November. Please answer these questions: 1. Where an apiary is located, and hives, through necessity, are placed on broken or cultivated land, what mixture of grass or clover will permanently subdue the growth of noxious weeds or grass? 2. Also the best time and amount of seed to sow. 3. How would Japan or white clover answer?—Texas.

For Texas, I cannot answer.—M. MAHIN.

Here, I would sow mixed grasses and white clover. I cannot speak for Texas. —A. J. COOK.

Ask the farmers in your neighborhood. They know most about such things, and also know your soil and climate.—JAMES HEDDON.

Like Dr. Miller, I really "don't know." I hope some one does, for I have trouble from that cause.—J. M. HAMBAUGH.

1. Blue grass, white clover and orchard grass. 2. Sow, in March, of blue grass one bushel per acre; white clover, 3 pounds per acre; orchard grass, 6 pounds per acre.—MRS. L. HARRISON.

White clover might do; but why do you not keep those weeds down with sand, sawdust, or something of that kind, and kill the few weeds that come up through it with salt.—G. M. DOOLITTLE.

If you wish to cultivate the land by raising grass that will make a permanent sod, sow thickly some lawn grass as early as possible in the Spring. White clover and June grass make a good sod. —A. B. MASON.

I would give more for the reply of one intelligent farmer living in your locality, than for those of all the bee-keepers in Illinois. Ask several around you, or some good agricultural paper in the South.—C. C. MILLER.

Crab grass is a nuisance in a large apiary. If the ground is not too much shaded it might be a good plan to sow clover thickly, and, perhaps, mix in some blue grass. Sow clover as early in the Spring as possible.—C. H. DIBBERN.

1. Use plow, hoe and scythe to exterminate the weeds and grass. You must get rid of these before you can expect a stand of clover. 2. In the Fall. 3. Very well if you properly prepare your ground for it.—J. P. H. BROWN.

1. Sow sweet clover or alfalfa, or alsike and timothy. 2. Sow the sweet clover in the Fall, and the others in early Spring. 3. If the white clover does well on Texas soil, it should hold its own against the weeds.—G. L. TINKER.

1. From my experience, I think ground ivy, or "gill-over-the-ground" would come as near to running everything else out as anything, but the cure might be worse than the disease. June grass, also, runs everything else out (except the ivy). 2. Perhaps in your State, the latter could be sowed in Winter or early Spring.—EUGENE SECOR.

1. Blue grass, sometimes called June grass, if it flourishes in your locality, is best either alone or mixed with white clover. Clover alone would not be so good. 2. In the Winter, or very early in the Spring. The point is to give it a long period of moist weather to allow it to get well rooted before dry weather.— R. L. TAYLOR.

My plan is to set the hives at least 6 feet apart, so that I can keep down the weeds and grass with a scythe and a grass hook. The weeds are just as easily subdued, or rather kept under control, as any of the grasses are. My yard is a rich blue grass sward, and I have to "mow" it once in two weeks, and I use a grass knife to trim around the hives, which is a daily job during the growing season. Perhaps nothing will give you less trouble than your weeds. I believe I would swap you my blue grass for your weeds. Blue grass is so fine in blade and straw that it is hard to cut.— G. W. DEMAREE.

The farmers in your neighborhood can answer these questions more satisfactorily than any Northern bee-keeper. Why not keep the land around the hives clean with sand or gravel?—THE EDITOR.

An Old Song with a New Tune.

ELIZABETH P. ALLEN.

There's a saying, old and rusty,
But good as any new—
"Never trouble trouble,
'Till trouble troubles you."

Trouble's like a thistle,
That hangs along the way;
It cannot fail to grab you
Some other bitter day.

But why not walk around it?
That's just what you can do;
Why should you trouble trouble,
Before it troubles you?

Trouble is a honey-bee,
It keeps you always vexed;
It surely means to sting you,
The next time—or the next.

But bless you, bees think only
Of breakfasts dipped in dew;
Keep right ahead—this trouble
Will never trouble you.

Oh, merry little travelers,
Along life's sunny ways,
When honey-bees and thistles
Affright you at your plays,

Remember the old promise
That your sorrows shall be few,
If you never trouble trouble,
'Till trouble troubles you.

—THE INDEPENDENT.

Topics of Interest.

Medium Spacing of Brood-Combs.

REV. W. P. FAYLOR.

During the last five years I have experimented pretty thoroughly upon spacing brood-combs. What I term medium spacing is 1½ inches from center to center, or a medium distance between the close spacing of combs, as practiced by some of our modern bee-keepers, and the distance that bees will build their combs apart naturally.

Since my last article appeared in the BEE JOURNAL upon this subject, I have waited with some concern to see something reasonably fair in favor of the close spacing theory, but the best usually given is, "I do not know what is the proper distance to space brood-combs."

Some articles on the above subject in *Gleanings*, in favor of close spacing, during the last few months, have been really laughable. A writer in the last issue of that periodical says: "I would say to those who never use ⅜ spacing (that is, ⅜ inch between combs), just try one hive; and when you get the combs all shaved down, see what sheets of brood you will have, and where you used ten combs seven or eight will do. I feel very sure the cause of bare spots of no brood is caused by two combs so close that the queen can not get there. I have seen one-fourth of a Langstroth frame without honey or brood, and the cell not more than half depth."

Yes; and I have seen the same thing, too. Queens will not lay at all in cells that are very shallow. I wonder sometimes how her highness can straighten out so as to lay at all where combs are ⅜ of an inch from each other.

I would not, however, be quite so expansive as to put seven frames in a hive where ten frames had been used. As the writer says, it might do, but that gives fully 2 inches space to every comb.

Now, I object to this close spacing for the further reason that close spacing gives us weaker, and hence, shorter-lived bees. Herein lies the secret of the failures in the honey crop of late years.

As we cramp our bees more and more each year, and each succeeding generation the bees become weakened and reduced in strength, we can expect, by and by, no surplus honey at all, unless we reform on this line.

You have all observed that the bees reared in the early part of the season were not nearly so active nor strong as those bred during the Summer. To rear strong bees requires sufficient animal heat to properly develop the brood. This cannot be had where combs are closely spaced, as a single depth of bees over the capped brood is hardly sufficient to rear or breed bees two months of the year.

Suppose, as a few apiculturists advise, we space the combs ⅜ of an inch apart, and the bees are left to themselves to rear queens. How, I ask, can the bees extend a queen-cell ¾ of an inch, and yet have room for enough bees to cover the cell to keep it as warm as it should be?

I bought one of those $6 queens last season, and her progeny are very yellow, but the color of her bees is all she is good for. She is the poorest layer I ever saw. Why is this so? Simply because she was reared very late in the season, to mate with selected drones, when the animal heat of the hive was too low. If I am correct here, then much of the disease attending modern apiculture is a result of close spacing as much as anything else. I have noticed in some of these closely-spaced-frame hives, in the cooler months, large patches of brood which had died when nearly ready to creep out of the cells, all because enough bees could not cover the brood to keep it at the proper temperature.

The best apiary I have visited this season had many of the combs spaced as far as 1¾ inches from center to center. I admitted at once that the bees were stronger and more hardy than mine—at least a part of mine—and the hives were so heavy that it required a man of considerable muscle to lift one.

I estimated the amount of honey at 75 pounds, on the average, to each colony, in the brood-chamber, exclusive of surplus. Let us give our bees plenty of room and air, and allow them to work as instinct directs them, and dead brood, foul-brood, and the like, will be things of the past.

State Line, Ind.

Discovery of the Origin of Foul-Brood.

C. J. ROBINSON.

On page 219, under the ominous heading, "Errors Respecting Foul-Brood Exposed," Mr. Corneil attacks my claim of priority of discovering that foul-brood is the result of bacteria, and he fain would rule me out peremptorily. He denies my claim of priority, stating that Dr. Cohn was the first who discovered bacteria in foul-brood. If it is true that Dr. Cohn is entitled to "the honor of priority of discovery," I desire to reverence and applaud him as a public benefactor.

According to Mr. Corneil, Dr. Cohn made the alleged discovery in 1874. This date corresponds with the epoch of the craze over bacteria at the time of its advent, and Dr. Cohn—and probably other microscopists—looked for bacteria in samples of putrid brood, supposed to be foul-brood. Dr. Cohn espied minute forms of life in the samples when under the lens, and jumped to the conclusion that what he "discovered" was bacteria, and that, of course, the bacteria caused foul-brood.

Upon this discovery he based the hypothesis he recorded, which was alluded to as quoted by Mr. Corneil. Dr. Cohn's discovery afforded no clue to a solution of the problem, and nothing came of it. Prior to 1882, no writer "respecting foul-brood," in America, or elsewhere, mentioned that foul-brood is caused by germs. Mr. Cheshire, who, presumably, has for many years been cognizant of all the discoveries in Europe respecting foul-brood, takes to himself, inferentially, the credit of discovering, in 1870, the foul-brood germ, and named the family *bacillus alvei*. This circumstance is conclusive evidence that Dr. Cohn is not entitled to the honor of priority, even in far-off Europe.

In 1882—eight years previous to the publication by Mr. Cheshire of his experience respecting foul-brood—I made the announcment, through bee-periodicals, that I had, by actual experiment, discovered that foul-brood virus was micro-organisms, which *grew from spores*, and that the microbes might *originate* outside of or within a colony.

Dr. Cohn claimed to have discovered very minute germs in dead brood. Forms of life can be discovered in all decomposing brood, and in all putrefying substances. Dr. Cohn did not make experiments that demonstrated whether the germs that he espied under the lens were such as originate foul-brood by contagion. Therefore, his reported discovery serves for naught, other than to furnish Mr. Corneil with manna while wandering in the wilderness of "confusion," which he credits me with "creating."

Mr. Corneil declares that I am in error "respecting fermentation." Space is too valuable to discuss his labored effort to impeach my statements. Suffice it to say, that I have not disagreed with any of the acknowledged scientists "respecting" fermentation. There can be no real satisfaction in debating with one who introduces a criticism with the statement that "instead of advancing my own opinions (presumedly having no experimental knowledge to base opinions on), I shall quote" what I can pick up from Dr. and Prof. So-and-so, "who are recognized authority"—equal to Prof. Wiley, and whose authority might pan out in samples like "the Wiley lie." It cannot even be inferred from Mr. Corneil's writings, that he ever had a case of foul-brood, or that he ever saw a case of it.

It will be observed that Mr. Corneil borrows all of the weapons used in his attack, and imports all of the ammunition fired at my statements. If Dr. Cohn published the alleged discovery in 1874, why, in the name of humanity to the bee-keeping world, and as an apostle of that new "Nazereth," proclaim the tidings delivered by Dr. Cohn, whom you represent as the immaculate? Mr. Corneil admits that my statements are correct, so far as they relate to my having a case of foul-brood propagated, but he flatly disputes my explanation, and interposes his version, assuming to decide peremptorily that *he* is unquestionably competent to solve the problem which I was in error about. Even though Mr. Corneil is, as he assumes to be, in a high degree more learned, more scientific, and more wise, I conducted the experimental investigation, the whole being under my critical observation, and I ought to be able to decide as to the "results" as well as any one in Canada, who never experimented with foul-brood; and nothing appears to even indicate that Mr. Corneil ever had or saw foul-brood.

I invite special attention to Mr. Corneil's "easily explained" version of the case of foul-brood being "propagated." He disposes of it by a sort of coroner's verdict—"I find that when the resistance of the living tissue cells ceased, the bacillus alvei floating in the air (!) made a lodgement, and found in the dead larvæ a congenial medium for their growth and multiplication!" Thus, he is the father of the idea that foul-brood germs are ever present and "floating in the air"—the atmosphere chock full of them—and when living tissue cells cease to resist (wonder when or in what stage it occurs), the bacillus finds a lodgement in brood, and foul-brood is the result.

According to Mr. Corneil, foul-brood germs, like house-flies, are ever looking for lodgement whenever living tissues cease to resist. His version of the origin of foul-brood is so fallacious on its face that I need not further reply to it.

Mr. Corneil attacks my statement that foul-brood microbes do not harm imago bees. He quotes from encyclopedias, and other books written by those who know nothing practically about bees or foul-brood, but are expert at theorizing, and as reliable as Prof. Wiley. In reply to Mr. Corneil's references, aimed at knocking me out, I will quote from one whose "writings are recognized authority" the world over. I allude to Pastor Dzierzon, who, after years of dealing with foul-brood, wrote: "*Foul-brood*, indeed, *is a disease exclusively of the larvæ*, and *not* of the emerged bees, or of brood sufficiently advanced to be nearly ready to emerge." I refer to the "encyclopedia" by Rev. L. L. Langstroth, 3d Ed., page 259. Every one who has had experience in removing bees from foul-broody colonies, will vouch for my "statement," Mr. Corneil to the contrary notwithstanding.

Mr. Corneil takes me to task for stating that "foul-brood is not a disease." The term was coined by Germans, who suffered loss from the effects of brood becoming *foul*. The term plainly expresses rottenness or putridity—indicating a state of dissolution of inanimate bodies. The term *disease* expresses not-at-ease, and is only applicable to the living. Brood cannot properly be called *foul* until dead.

Mr. Corneil attempts to frighten readers by alluding to my "statement that corrosive sublimate may be used as a spray for combs containing diseased brood." Mr. C. never used corrosive sublimate in such cases, and has no knowledge of its use as mentioned by me. Judging from his assumed medical lore, he is not competent to teach. Bichloride of mercury (corrosive sublimate) is one of the preparations in common use by eminent physicians and surgeons. I gave the proportions for a solution to be used as a spray—"one part corrosive sublimate crystals to one thousand parts water"—just the same as is used by surgeons as an antiseptic in the *modus operandi* of a douche when performing surgical operations—the solution streaming onto the skin before cutting, and following the cutting instrument and washing the wounds, and the dressings are all soaked in the solution. Any physician will admit that my "statement" about using corrosive sublimate to spray brood combs cannot be successfully controverted. For, indeed, there is no other article known equal to corrosive sublimate as a germicide, and it does not disturb bees, as do the acids commonly used in treating foul-brood. The use of bichloride of mercury as an antiseptic was introduced by the renowned Dr. Robert Koch, and its use as such will continue unless it becomes known to the world that Mr. S. Corneil is a graduate of the medical sciences, well seized with diplomas, and recognized as higher authority.

Now, let us compare true knowledge with that of the critic disputer. Within the precincts of Ontario, Canada, are many expert, scientific apiarists. Chief among them are Mr. Allen Pringle, who is President of the Ontario Bee-Keepers' Association, and Minister or executive under the Foul-Brood Act, and Wm. McEvoy, Esq., is the Official Inspector. Why was Mr. Corneil ignored? O, prophets in their country get left (for cause), which explains.

Mr. Pringle read my article alluded to by Mr. Corneil, and, being pleased with it, at once wrote his subordinate, Mr. McEvoy, calling attention to the merits of the article. Mr. McEvoy procured a copy of the AMERICAN BEE JOURNAL alluded to by Mr. Pringle (Mr. McEvoy is now a subscriber), and on reading the article that Mr. Corneil alleges is a tissue of serious errors, he indited a letter to me, which was intended to be a private one; but inasmuch as my communication is desperately attacked by one of his old school-mates, I venture to quote from it. Mr. McEvoy says: "I read over and over your article in the AMERICAN BEE JOURNAL of Nov. 1, 1890. It is a very valuable production, worth thousands to our bee-men. It is the best letter relating to the *cause* of foul-brood that I ever read, and I believe it is the best ever published in any country. When bee-keepers will look well after their bees in the Spring, and carefully attend to the brood in every colony, then foul-brood will be a thing of the past. In my annual official report to the Minister of Agriculture, for 1890, I state that the essay of Mr. C. J. Robinson, of Richford, N. Y., which appeared in the AMERICAN BEE JOURNAL of Nov. 1, 1890, is the best article on foul-brood that I ever read, and I heartily commend it to the attention of bee-keepers."

Now, in submitting the issue raised by Mr. Corneil, I do not assume, as he has, to prejudge the case, and beg readers to recognize my verdict as law. I only submit testimony, presuming your readers equally as competent as myself to weigh and determine.

When, oh, when, will Millerism (Dr. C. C.) become reasonably popular? Well, I "don't know."

Richford, N. Y.

Capital Bee-Keepers' Convention.

C. E. YOCOM.

The Capital Bee-Keepers' Association met at Springfield, Ills., Feb. 26, 1891, and was called to order at 10:30 a.m., by President P. J. England.

The minutes of the last meeting were read and approved, after which the Secretary read his report, in which was embodied the fact that the special object of the meeting was to make preliminary arrangements for organizing an Illinois State Bee-Keepers' Association.

The President appointed Thomas G. Newman, J. M. Hambaugh and C. P. Dadant as a special committee to ascertain the desirability, etc., of such an organization, and they immediately began to work.

The report of the committee on Apiarian Exhibits was called for, but that body was not ready to make a formal report, since its work was not yet completed.

The President called for experience in reference to bee-escapes.

The Secretary had tried the Dibbern escape, but about two days were required to cleanse the supers of bees. His experience was, however, somewhat limited; and this was not the improved escape.

J. W. Yocom had tried the improved Dibbern escape, with and without an empty super under it, and says that with an empty super under it, it is a success. He arranges them one evening, and takes the filled super off the next morning.

The special committee returned and announced their readiness to report; but at that moment, Chas. F. Mills, Secretary of the State Board of Agriculture, entered the room, and, after being introduced by the President, addressed the Convention in reference to organizing a State Bee-Keepers' Association. He explained a movement that is on foot to organize what is to be known as the "Farmers' Club." The proposed plan is for the organizations of the several departments or branches of farming, to meet in the same city, and at the same time; each department to hold its own session during the day, and all meet in a joint session in the evening. Excursion rates may be had, and each department will have an opportunity to explain or discuss the relation it bears to another.

In reference to the State Bee-Keepers' Association, he said: "I hope you will take hold of this work, and we will help you. I am glad to see so many here. When the State Board of Agriculture was organized there were only five present. Now, look at it! I hope that you will complete your organization. You should have an appropriation sufficiently large to defray the expenses of a grand exhibit at the World's Fair. If there are any questions that you would like to ask, I will be glad to answer them."

Mr. Newman—Has there been any arrangements made by the State in regard to the World's Fair?

Mr. Mills—The general appropriation is $1,000,000. It is a kind of an omnibus bill—all lumped together. The live-stock men have asked for $50,000 for their exhibit. The dairymen are going to ask for a large appropriation, and I think you can get a very good appropriation if you ask it.

Mr. Hambaugh—How much do you wish to have appropriated? I do not think we will get as much as we need. I do not think the general appropriation will be $1,000,000.

Mr. Newman—We should not ask for too much. I think we could not possibly get along with less than $2,000. We ought to have $5,000.

A. N. Draper—After April 1 there will be a bounty of 2 cents per pound on sugar. I think this will affect the price of honey, and that we ought to have a bounty on honey also.

J. A. Stone explained a way of ventilating bee-cellars, after which the Society adjourned until 2 p.m.

The report of the special committee was called for, and Mr. Newman, chairman of the committee, reported that all present were in favor of a State organization. Then, for the purpose of organizing the same, the Capital Bee-Keepers' Association took a recess, which lasted until 4:30 p.m., at which time the Society was again called to order, only to adjourn.

Sherman, Ills.

Feeding Bees with Sugar-Syrup.

D. STEWART.

I have kept bees for the last 30 years, for my own use, and for pleasure, but never had over 50 colonies at one time, and on two occasions lost them all. One year over 40 colonies froze on the winter stands, but that Winter the mercury did not rise above zero for three weeks, at one time, and the bees could not live through the long period of cold with no protection.

Before that I had never given my bees any protection in Winter, but left them to shift for themselves. Afterward, I put them in the cellar, and they seemed to do well until six or eight years ago, when I lost 20 colonies—all I had in the cellar—and they had plenty of nice honey in store, too. The temperature of my cellar is about 40°, so I lost faith in that method of wintering.

Then I had no bees for a year, but felt lost without them, and bought 5 colonies, which did well until last season, when the honey crop was a total failure, on account of the drouth. I knew there would be no surplus, but did think they would gather enough honey for winter stores.

Owing to my absence from home, they did not receive proper attention until the weather became too cold to feed them upon the summer stands, when, finding that they were almost destitute of stores, I doubled up 5 or 6 colonies, moved 20 of them into the cellar (leaving one colony out on the summer stand, to see how they would winter there), and began feeding them.

I dissolve 3 pounds of white sugar in 1 pound of water, and, when cool enough, hold a skimmer over the combs, pouring the syrup through it, and in this way I get 2 or 3 pounds of syrup into each frame of combs.

As an experiment, I tried feeding 2 colonies with sorghum syrup, but have found it to be a failure, as both colonies are dead. When I began feeding them, my bees did not have 15 pounds of honey, all told. I have 4 colonies of Carniolans, 6 of Italians, 4 of black bees, and the remainder of them are hybrids.

I was amused at the different opinions regarding honey-dew, expressed on page 190, as I know from observation that it is neither honey-dew nor bug-juice. I think that it was in the Spring of 1882, that I noticed the bees working on the soft maples and box elders in my dooryard, and, on examination, I found the leaves smeared with honey-dew, but could find none on any of the other trees, and, in my opinion, it was caused by the heat of the sun in the daytime, and the cool nights, expanding and contracting the tender leaves.

This was in the latter part of May, before there was a fly or an aphide hatched, as I took my magnifying glass and looked for aphides, having been told that they were the cause of honey-dew, but am certain there were no insects to do this, and there has never been a repetition of this on my trees.

North Liberty, Iowa.

Failure to Cure Foul-Brood Explained.

WILLIAM M'EVOY.

In the American Bee Journal, page 156, I read Mr. Koeppen's answers to my questions, and am well pleased with every one of them. The honey season in Mr. Koeppen's section was such a complete failure that he did not get one ounce of honey from either clover, basswood or buckwheat, and he says that his bees were in such a starving condition in July that he had to feed them.

His answers to questions 6, 7 and 9 show very plainly that there was no honey in anything in his locality, and that was the reason why one of my plans of curing foul-brood in the honey season failed with him. Mr. Koeppen says that everything seemed to blossom well, but he did not get any honey, and would like to know whether the fault was in the bees or in the flowers. The fault was in the season, and not in either the bees or the flowers.

In 1888 my apiary was in fine condition, but I did not get one pound of honey, and everything blossomed well; but there was no honey in anything here that season, and, what was still worse, that Fall I had to feed $71 worth of granulated sugar to my colonies to provide them with stores for Winter. My section is a good one for honey, and I have been a bee-keeper since 1864, but the season of 1888 was the only time I ever knew the honey crop to fail.

In 1888, when we had a blight almost as bad as Mr. Koeppen had in 1890, I cured every colony of foul-brood in an apiary for Mr. James Marshall, of Binbrook, and I enclose a letter from him, which explains all about it:

> This is to certify that in 1888, I had 40 colonies of bees, more or less afflicted with foul-brood, which was caused by using combs, the previous year, which I procured from a bee-keeper who lost almost all his colonies from that disease, of which fact I was ignorant. In June I applied to Mr. McEvoy, and he removed every comb from the diseased colonies, and shook the bees back into the same hives, giving to each colony five clean, empty combs, and ordered that these combs be extracted each evening for four days, and on the fourth evening to remove them and replace them with another set, which I was to leave in the hives, and extract from them twice.
>
> The brood was put into empty hives, which were tiered up from two to four stories high, and kept closed for three days. As soon as most of the brood was hatched, I removed the combs, shook the bees into a single hive, gave them five clean, empty combs, and extracted each evening for four days; then, in the evening, I took the bees which were hatched from the foul-brood combs to the old stand, and put them in with the old colonies, thus making all the colonies strong.
>
> This was during the honey season, but the honey crop was a failure here in 1888, and my bees gathered scarcely more than enough honey to feed them while they were being cured, and in the Fall I was compelled to feed them, in order that they might be prepared for Winter.
>
> In 1889, I received 4,000 pounds of honey from 35 colonies, having lost but 5 colonies during the Winter and Spring, and during the Summer they increased to 65 colonies, which I wintered without the loss of a single colony. In June, 1890, I united the colonies, until the number was reduced to 42, and from those 42 colonies I received 7,000 pounds of extracted-honey, and they increased to 94 colonies.
>
> Had it not been for Mr. McEvoy, my apiary would have been destroyed by foul-brood, but I am pleased to say that by his method the disease was eradicated, and now my apiary is one of the best. As I have a farm which demands my attention the greater portion of the time, I try to prevent increase.
>
> Binbrook, Ont. JAMES A. MARSHALL.

Mr. Marshall is well and favorably known, and his word is considered as good as his bond.

The complete failure of honey in everything left Mr. Koeppen's bees in such a starving condition that they would not stay in the hives, when he gave them starters or foundation, but swarmed out so much that more or less of the bees got mixed into every colony, and that spread the disease with a vengeance.

In that time of blight, right in the honey season, when Mr. Koeppen found 7 colonies of foul-brood, if he had given each colony about five or six clean, empty combs, and fed the bees freely each evening for five nights, and extracted on the second and fourth evenings, then removed the combs the fifth evening and given another set of clean, empty combs; fed in the evenings, and extracted twice, as before, leaving in the second set of combs, not one would have swarmed out, and he would have made *a sure cure* of them.

If done in a time when the bees are gathering honey, no feeding will be required, but the first set of combs *must* be extracted in the evenings, and removed on the fourth or fifth evening, to be replaced by another set, which are to remain and be extracted twice more.

Some may ask, will that plan cure in all cases? I say, *yes; in every case*, if properly carried out. In curing foul-brood everything depends on whether the cure is to be made before, in, or after, the honey season. If the cure is to be made before the honey season, or in a time of blight, remove the diseased combs, and give clean, empty combs, and and in the evenings feed sugar syrup and extract. The fifth evening, remove the combs and give another set of clean combs, which are to remain, but must be extracted twice, and then everything will be all right.

If done in the time of a honey flow, remove the diseased combs and give starters for four days, then remove the starters and give foundation.

In the Fall, if part of an apiary is found diseased, if the owners will feed the sound colonies until the bees seal the combs, then, in the evening, remove the combs from the diseased colonies, and give them *sealed combs* from the sound colonies, all will be right.

The combs of brood removed from the diseased colonies in the honey season, should be put in empty hives, tiered up two or more stories, and the entrance kepts closed for two days. If the weather is very warm, shade the hives, and when the most of the brood is hatched, remove all the combs and shake the bees into a single hive, and treat them according to the season, by either using two sets of clean combs and feeding, or, if the bees are gathering honey, use starters four days, then give foundation and a young queen, or queen-cell, and all will be right.

The plan recommended by Mr. Pringle, of curing foul-brood in the honey season, by starters and then foundation, is one of the best plans of cure ever given, if done in the time of a honey flow, and in the evening, so that the bees will get settled down nicely before morning.

All of the diseased combs, and the combs that were used for four or five days, *must be melted into wax*, and all honey or feed from diseased combs *must be boiled before it is fed to other* colonies.

There is not an apiary that has foul-brood that I cannot cure between the last of May and the middle of October. But it pays best, and is much less work, to cure foul-brood in the time of a honey flow.

Woodburn, Ont.

Illinois State Bee-Keepers' Association.

JAMES A. STONE.

The Capital Bee-Keepers' Association met in Springfield, Ills., Feb. 26, 1891, according to previous notice. After the preliminaries were concluded, a recess was taken for the purpose of forming a State organization.

P. J. England, of Fancy Prairie, was chosen temporary chairman, and C. E. Yocom, of Sherman, temporary secretary.

On motion, the chair appointed Thos. G. Newman, of Chicago; C. P. Dadant, of Hamilton; and Hon. J. M. Hambaugh, of Spring, a Committee on Constitution.

Adjourned until 1:30 p.m.

AFTERNOON SESSION—2 P.M.

Committee on Constitution reported. The report was read by sections, amended, and adopted as follows:

Article I.—Name.

This organization shall be known as "The Illinois State Bee-Keepers' Association," and its principal place of business shall be at Springfield, Illinois.

Article II.—Object.

Its object shall be to promote the general interests of the pursuit of bee-culture.

Article III.—Membership.

1. Any person interested in apiculture may become a member, upon the payment to the Secretary of an annual fee of one dollar.

2. Any person may become an honorary member by receiving a majority vote, at any regular meeting.

Article IV.—Officers.

1. The officers of this association shall be a President, five Vice-Presidents, a Secretary, and a Treasurer. The term of office shall be for one year, or until their successors shall be elected and qualified.

2. The President, Secretary, and Treasurer shall constitute the Executive Committee.

3. Vacancies in office, by death, resignation or otherwise, shall be filled by the Executive Committee until the next annual meeting.

Article V.—Amendments.

This Constitution may be amended at any annual meeting by a two-thirds vote of the members present—thirty days' notice having been given to each member of the association.

On motion the chair appointed a committee of three, as a Nominating Committee, as follows: Col. Chas. F. Mills, Springfield; Hon. J. M. Hambaugh, Spring; and C. P. Dadant, Hamilton, The committee reported as follows:

President, J. P. England, Fancy Prairie.

Vice-Presidents, Mrs. Harrison, Peoria; C. P. Dadant, Hamilton; W. T. F. Petty, Pittsfield; Hon. J. M. Hambaugh, Spring; Dr. C. C. Miller, Marengo.

Secretary, Jas. A. Stone, Bradfordton.

Treasurer, A. N. Draper, Upper Alton.

Mr. Black, of Clayton, moved to adopt the report. Carried.

Hon. J. M. Hambaugh moved to make Mr. Thomas G. Newman, of Chicago, the first honorary member. Carried.

The following preamble and resolutions were adopted:

WHEREAS, The Illinois State Bee-Keepers' Association has been advised of a movement looking to the organization of an association to be known as the "Illinois Farmers' Club," and composed of the live-stock and other associations of the State, and having for its object annual meetings for the promotion of the various industries represented; and

WHEREAS, The interests of all engaged in farming pursuits can be greatly promoted by such annual gatherings, held for the purpose of discussing all matters relating to agriculture; therefore, be it

Resolved, That the Illinois State Bee-Keepers' Association hereby agree to co-operate with the agricultural organizations of the State, in holding a series of meetings in the month of December, 1891, at Springfield.

Resolved, That it is the sense of this Association that arrangements be made for holding the meetings of the respective organizations, composing the Illinois

Farmers' Club, in the day time, and that mass-meetings, composed of all of the members of the several societies, be held in the evening, in the Hall of Representatives in the Capitol Building, during the continuance of the session of the Illinois Farmers' Club.

On motion, a committee of three was appointed by the chair, to draft by-laws, and report at the next regular meeting, as follows:

C. E. Yocom, of Sherman; Aaron Coppin, of Wenona; and G. F. Robbins, of Mechanicsburg.

Voted, that the Executive Committee be a Board of Directors for incorporation.

A motion prevailed that this committee be authorized to procure the Articles of Incorporation, and that they be furnished with the required amount to pay for the same.

It was moved, by Mr. Thomas G. Newman, that our State Legislature be asked for an appropriation of five thousand dollars ($5,000) to represent our interests at the Columbian World's Fair. Pending discussion of this motion, Mr. Newman very eloquently addressed the association as to exhibits, and with telling affect. The motion was carried.

It was moved by C. E. Yocom, that the chair appoint a committee of three—amended, by making it seven—to present the above memorial to the Legislature.

The chair appointed the following: Mr. Thomas G. Newman, C. P. Dadant, Hon. J. M. Hambaugh, Col. Chas. F. Mills, S. N. Black, Hon. J. S. Lyman, and A. N. Draper.

A motion that the next regular meeting be at the call of the Executive Committee, was carried. Adjourned.

Bradfordton, Ills.

Experience in Rearing Queens.

THEODORE HEISS, JR.

After considerable experience in bee-culture and in queen-rearing, I have come to the conclusion that my own methods are most liable to insure perfect queens. The usual way of rearing queens, is to make a colony queenless by removing the queen and supplying it with a comb of eggs and larvæ. After the queen-cells are capped, they are hatched in a nucleus, and finally mated in the same. This manner of rearing queens seems to be one of emergency, which has many disadvantages.

Bees often take brood too far advanced, and the queen-cells are generally small, and I never had a good queen hatched out of a small queen-cell.

My method is as follows: Early in the Spring, say about the first of April, I take out my selected colony containing my best queen, from which I desire to rear queens, protecting the colony from cold by a chaff hive. I stimulate brood-rearing about the last of April, by feeding daily about one pound of sugar syrup, slightly warmed, so as to get them under the swarming impulse about May 20, or earlier if the weather will permit.

As a rule, I cut out all newly-made queen-cups in any of the hives, and preserve them in a little box, which I carry with me while working in the apiary. After having collected a number of such cups, I fasten them (by dipping the base of them into a little melted wax), say 10 or 12 in number, onto the bottom part of one or two combs (after having cut off 2 inches of the bottom of the combs), parallel with the bottom, fastening the cups point down, in the vacant place.

I carry the frames thus prepared back to the queen-rearing hive, the bees of which, being now under the swarming impulse, and building queen-cells, will complete the newly introduced queen-cups, preparing them for the queen to lay in. Next, I proceed to crowd the queen-rearing hive by adding to it one or two weak colonies, all of which stimulate the queen to lay in these queen-cells to hasten swarming.

After the first cell is capped, a swarm will issue with the original queen. I hive this swarm, and put it in another place. I take out queen-cells as fast as capped, and cage the same, putting them into other hives to hatch, except the last one, at the same time noting the day each one was capped, and examining the hives with the cells twice a day, so as to know precisely what day each will hatch.

Twenty-four hours before a queen hatches, I prepare a nucleus by fitting four 4¼x4¼ frames in a little hive, with brood, for that purpose. The reason for making these nucleus frames exactly that size (4¼ inches) is this: As eight of those small frames fit in one Langstroth brood-frame, being only a fraction larger, I place such frames, with eight small ones, in the center of the brood-nest of some strong colony. Taking four of the small frames, with a nucleus, and adding a cupful of bees, I at once introduce the virgin queen and close the entrance for one day.

In from 3 to 9 days the queens will be mated, most of the brood will be hatched, and the new queens will commence laying eggs. I leave them in the nucleus until some of her eggs hatch, to ascertain whether she is purely mated, and thus she is prepared for further use.

Now, I take the original queen and introduce her in a colony which is ready to swarm, after cutting out all queen-cups and preparing frames with queen-cups as before described, and adding more bees, so as to hasten swarming, and thus rearing an additional number of queens. In this manner one could rear as many as 200 queens before Aug. 1, all under the swarming impulse.

Panama, Iowa, Jan. 6, 1891.

Poplar Trees and Honey.

REV. M. MAHIN.

On page 294, P. D. Ellingwood inquires concerning the value of poplar to the bee-keeper, etc. In order to answer his questions, it will be necessary to come to an understanding concerning the trees that are meant. The popular names are not always correct.

The poplars proper, are included botanically, in the willow family. There are nine species described in Gray's Field Book of Botany. Among these are *populus alba*, white or silver leaved poplar, a native of Europe; the American aspen; the Lombardy poplar; and the cotton wood. These all yield an abundance of pollen, but, as far as I have observed, no honey. They bloom very early in the Spring, along with the earlier varieties of willows.

There is another tree, which, in the West, is called poplar, and by the masses known by no other name, that yields honey in abundance. It is *Liriodendron tulipifera* of the botanical books. "A tall, very handsome tree, in rich soil, commonest W., where it, or the light, soft lumber (much used in cabinet work), is called WHITE WOOD, and even POPLAR; planted for ornament; fl. late in Spring, yellow with greenish and orange. Leaves with two short side lobes, and the end as if cut off."—Gray.

This tree belongs to the magnolia family. The flowers resemble tulips, and are nearly of the same size. The nectar is more abundant than in any flower I have ever examined.

Unless lately rifled of its store, a single flower will contain enough to load more than one bee. The honey is rather dark, but of good consistency and pleasant flavor. The time of flowering in this latitude extends into June.

Richmond, Ind.

Apicultural Notes from Nebraska.

J. M. YOUNG.

White clover is very plentiful in our locality.

We seldom use a veil in handling bees. Our bees are very cross at times, but we use plenty of smoke when working with them.

We allow but one swarm to issue from a colony during any season, and prevent them from swarming as much as possible by giving them plenty of box room.

Our city is going to build an $80,000 Court House the coming Summer, and many other improvements are expected.

A portion of our apiary is fitted up (in due season) for extracting purposes, by giving two sets of combs, and extracting from the upper set.

Foul-brood was never known in our locality—in fact, we never saw a case of it. Our mind was made up long ago as to the best cure for it, and that is to destroy at once by burning—bees, hives, and all—as soon as discovered.

The most destructive birds on bees in this vicinity, are king birds. They will build their nests near the apiary, unless destroyed, and will take a large number of bees in rearing their young.

The best way to prevent robbing among bees is to never allow it to commence. "An ounce of prevention is worth more than a pound of cure" in this case. When once commenced the only sure way to stop it is to close up the hive entirely, or remove it several rods from the apiary.

We do not use labels on our sections, and yet we have our name and address on every section sold, or about our apiary. A small stamp, costing only about 75 cents, is used, and beats labels all hollow. The sections are stamped before they are folded up, and it can be done very rapidly, and with neatness.

An inexperienced bee-keeper came to us a few days ago, all worked up, and said that his bees were all dying off, and they were being dragged out at the entrance of the hives. Upon questioning him, we learned that his loss was nothing more than is usual at this time of the year.

Ever since we have kept bees in movable-comb hives, we have used 10-frame hives with good results, and now that there is so much discussion through the bee-periodicals, and the prevailing opinion seems to be that the eight frames are the best, we shall have to admit that good, sound reasoning teaches us that the eight-frame hives are the best, for obtaining comb and extracted-honey.

Plattsmouth, Nebr.

Doing as Other People Say.

F. SCOTT.

I have read nothing in bee-literature that seemed to suggest the old maxim that "God helps those that help themselves," more than did some of the articles written by prominent bee-keepers and eminent writers that seemed to say, "Do as I Do," or "Do as I Say." Although somewhat imperative, they can be taken to the mind of every bee-keeper, and by careful consideration of the truths implied in them, every one of the bee-keeping fraternity may profit.

I find that young bee-keepers are apt to admit that they "don't know anything" about bees, and are very anxious to learn all they can by reading, but when actual experiments are required, they say, "Oh, I am afraid! You do that and I will help you;" but their help consists in standing by and looking on, and after the work is done, they will invariably say, "Why, that is easily done, but I would have been stung if I had tried it. I believe you have some way of charming the bees—I know you have, or you could not do that." And so "knowledge is power," but the best power I ever found to manipulate bees, is a determination strong enough to drive away timidity.

One of my neighbors put his bees in the cellar last Fall, and when I asked him his reason for so doing, he said the *Stockman* said so. I then told him that we must, in reading the when to do and how to do, consider the latitude of the writer, and see if we could apply the same method profitably, and whether our climate required it or not. So, when I suggested that he take the bees out of the cellar, and place them on the summer stands again, he seemed to be very much afraid that they would freeze to death; and yet, here in Southeastern Ohio, we have had but two or three cold days this Winter, the mercury being down to zero but once. It has not been cold enough here to keep the buds in winter quarters, as the bees were gathering pollen on Feb. 21 from soft maples and elms. So he took his bees out of the cellar, and has since become a reader of the BEE JOURNAL.

Some readers do not seem to "catch on" when a new idea is presented, and they have the pleasure of thinking it out, while others would rather "do as I do," and save themselves from making experiments, or doing any mental work about it.

At times, when I am at a loss to know what to do, some writer sets forth his views on a subject to which I have been devoting some thought, and makes it so plain and profitable that it suits me perfectly. But when I peruse the next issue, up comes another contributor and says, "The article in last week's issue was misleading; the plans set forth will not work, as I have tried them and know better than any one can tell me, and I think the writer has copied it from some obsolete work on bees," and consequently makes his speech best, as he was heard last.

What is to be done? Shall I say that both are right, or one is in error; or say that both thought they were right? To say both were correct would be folly, and to say one was wrong—oh, I would not know which one to blame for doing right, so I will just call it advice. What, *good* advice? No, advice will do. So I will try both plans. I *will*, and I won't, and I shall be benefited as much as any other bee-keeper by the *will* and the *won't* plan. I find, in such discussions, that in most instances every one is left to judge for himself, unless he does it, and then don't do it.

But the questions that cannot be settled by experts; what do you think we juveniles can do with *them?*

Cloud, Ohio.

Convention Notices.

☞ The Southwestern Wisconsin Bee-Keepers' Association, will hold its next Convention in the Court House, at Lancaster, Grant Co., Wis., March 25, 26, 1891. All who are interested in bee-culture and convention-work are cordially invited to attend. The topics for essays and discussions were enumerated on page 183.

BENJAMIN E. RICE, Sec., Boscobel, Wis.

☞ The 13th annual session of the Texas State Bee-Keepers' Association, will be held at Greenville, Hunt Co., Texas, on April 1, 2, 1891. All interested are invited.

J. N. HUNTER, Sec.

☞ The 8th semi-annual meeting of the Susquehanna County Bee-Keepers' Association will be held at Montrose, Pa., on Thursday, May 7, 1891.

H. M. SEELEY, Sec., Harford, Pa.

We Club the American Bee Journal and the Illustrated Home Journal, one year for $1.35. Both of these and Gleanings in Bee Culture, for one year, for $2.15.

CONVENTION DIRECTORY.

Time and place of meeting.

1891.
March 25, 26.—S. W. Wisconsin, at Lancaster, Wis.
Benjamin E. Rice, Sec., Boscobel, Wis.

April 1, 2.—Texas State, at Greenville, Texas.
J. N. Hunter, Sec.

May 6.—Bee-Keepers' Ass'n. and Fair, at Ionia, Mich.
Open to all. Harmon Smith, Sec., Ionia, Mich.

May 7.—Susquehanna County, at Montrose, Pa.
H. M. Seeley, Sec., Harford, Pa.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

North American Bee-Keepers' Association

PRESIDENT—P. H. Elwood....Starkville, N. Y.
SECRETARY—C. P. Dadant......Hamilton, Ills.

◆

National Bee-Keepers' Union.

PRESIDENT—James Heddon ..Dowagiac, Mich.
SEC'Y AND MANAGER—T. G. Newman, Chicago.

Bee and Honey Gossip.

Bee-Keeping and Fruit Culture.

Here, on the Cumberland Plateau, bee-keeping, in connection with fruit culture, is a profitable business, and the few who are engaged in it are doing well. This is a healthy region, being 2,000 feet above sea level, with plenty of good water, an abundance of blossoms in the woods, and short, mild Winters. Fruit-raising is profitable, because crops are sure. If some of the Northern bee-keepers who are desirous of seeking a home in the South, would visit this region, I am satisfied that they would locate here, and I will be glad to correspond with any who desire information concerning soil, climate, etc.

Pomona, Tenn. H. E. PARTRIDGE.

◆

Encouraging Outlook.

Last Spring I had 43 colonies, almost all of them in good condition. They increased, by natural swarming, to 48 colonies, and gave me 3,000 pounds of honey, about one-half comb and the other half extracted, and 16 pounds of beeswax. The month of June was as good as any month I ever saw for honey until the drouth began. We had no Fall flow of honey, consequently, many colonies of bees starved this Winter. Everything is very encouraging for a big crop of honey this year. I never saw clover looking finer at this time of the year than it does now. I have 57 colonies now, which are wintering finely on the summer stands. The weather has been very warm this Winter, and the bees have taken a flight every few days. I see, on page 265, that Mr. E. C. Eaglesfield asks if anybody has a better way of dampening sections than he suggests. I prefer dampening them by grasping 20 or 30 of them (grooves all one way) in both hands, hold tightly, and plunge them under water. The water will go through the grooves and dampen the section where it bends, and the rest will be dry, if properly held.

WM. O. HEIVLY.
Raymore, Mo., Feb. 20, 1891.

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Providing Water for Bees.

My plan for providing bees with water, which I prefer to any I have seen published, is as follows: Take a barrel that is water-tight, and sink it in the ground up to the center, as this will prevent it becoming dry, and falling to pieces. Have the upper head of the barrel perfectly level; then take a nail keg, that is perfectly tight (or anything that will hold a pail or more of water), bore one or two small gimlet holes near the bottom, so that the water will drip out pretty fast, fill the vessel with water and set it upon sticks laid across the head of the barrel. Now, take corn cobs and lay close together all over the head of the barrel, as they afford a good alighting place for the bees, and when thoroughly soaked with water, the bees can sip the water without being in danger of drowning. D. B. CASSADY.

Litchfield, Minn.

◆

Bees Starved.

On page 165, Mr. Anderson asks: "In preparing my bees for winter quarters, I found one colony was dead, with plenty of honey. They were crowded between a few empty frames. I noticed pools of honey (or sweet water) under one full frame at the opposite side of the chamber from the dead bees." Now, what killed those bees? Was it the "honey or sweet water" that had dripped down and was "noticed under one frame at the opposite side of the" hive "from the dead bees," or did the bees starve? If the bees "were crowded between" "empty frames," that is something singular, as they are seldom found in that position. If, however, they were clustered between a few empty combs, that would be nothing uncommon, as many colonies get caught in that position, and starve during a cold spell, when they cannot get to the honey. A few years ago I thought to prevent this by using larger frames, and less of them, so that the bees would not have to change from one frame to another during the Winter. I now have over 80 hives with frames 3 feet long and 9⅛ inches deep, outside measure. The frames being made thick, to prevent sagging, are only 7⅞ inches deep inside. I have from 6 to 8 frames in a hive, and they run from front to rear. The intention was to have the bees clustered in the front of the hive in the Fall, and move back slowly as they eat the honey, not being obliged to change from one frame to another. The hives are not satisfactory for wintering, as the bees sometimes eat their way to the top-bars of the frames, and then starve with plenty of honey on the same frames, and within 8 or 10 inches of the cluster. I am now thinking of building hives with frames 18 or 20 inches deep, so I can have honey enough above the bees to winter them without their getting to the top-bars before warm weather in the Spring. HARVEY BACKUS.

Slocum's Grove, Mich.

Not a Bureau of Information.

I receive from 3 to 5 letters every week containing inquiries regarding this State, and while I am willing to give all the information possible concerning this portion of the State, I am not an animated gazetteer of the whole of it, and parties desiring information concerning any other portion of the State must seek it elsewhere. When I wrote to the BEE JOURNAL, volunteering to give information to the subscribers, I did not expect to be called upon for facts and figures in regard to the whole State, and should the number of inquiries continue to grow, I shall be compelled to employ a Secretary to answer them.

Vashon, Wash. JOHN BOERSTLER.

Is it from the Asters?

For the last two seasons there has been a strong, sour and peculiar scent around my bee-hives, of an evening, after a hard day's labor in the field, that I cannot account for unless it is from the aster. Some of my bee-keeping neighbors claim it is soured honey, but I claim it is from the aster, and I would like to hear the opinion of other bee-keepers. JAS. W. ADAMS.

Athens, Ky.

How to Make a Cheap Level.

Take a large bottle and fill it with water to within about one-fourth of an inch of the cork, then put in the cork. If this is laid on a flat surface, the little air space, or bubble, will be just in the center of the surface if level. This will be found convenient for setting bee-hives. A string can be tied around the neck, and the bottle hung up on a tree in the apiary, where it will always be in sight, thus saving time hunting for it. I forgot to say in, "A Watering Place for Bees," on page 11, to put a handful of salt into the keg about once a week. Bees are doing well; no loss, as yet, and do not think I shall have to feed them. If "Rambler" should ever, in his rambles, come near here, I wish he would call upon me. ED. E. SMITH.

Carpenter, Ills., Feb. 21, 1891.

Right Conditions, but No Honey.

We had no honey in this vicinity last year, although the conditions seemed to be all right—plenty of flowers, atmosphere well charged with electricity, and winds in the South and West. I placed one of my best colonies on the scales when the white clover was at its best, but the weight decreased every day, and in the end I was compelled to feed the bees. One thing I learned to my satisfaction, and that is, that all the colonies in white hives had to be doubled up without a single exception, while those in the brown hives nearly all came through the season in fair condition. The Spring was cold and backward, and the hives single-walled, and I consider this a very good test. J. H. OSTERHART.

La Crosse, Wis.

Italianizing an Apiary.

On page 293 J. M. Mitchell says, in answer to A. J. Duncan, that should he introduce 40 queens in the Spring, he would have 40 colonies stocked with black drones; but if he introduced them in the Fall, this trouble would be avoided. That depends on who has them to re-queen; if they were mine, and I had the means, I should re-queen in the Spring, in this manner: Write to some breeder and procure 25 or 30 queens for May or the first of June. These queens I would put into my best colonies, and double up the weak ones, thus saving queens, and making strong colonies. Keep the drones cut out—which is not much trouble—until the queens arrive. It will cost less in this way, than to wait until

Fall, when you would probably have 60 colonies instead of 40 to re-queen; and, besides, you are thus one year ahead.

Sheffield, Ills. A. L. Kildow.

Loss this Winter, 40 Per Cent.

The present Winter has been a bad one for bees in this locality, and many of them have died. With the exception of the colonies owned by one of my neighbors and myself, I think that at least 40 per cent. of the bees have died, and the worst month for the careless and thoughtless bee-keeper is just beginning. I have lost 3 colonies out of 33, and the remainder are in good condition, and rearing brood. A few days ago I saw two young drones carried out from one of my colonies. This is rather early for drones in a well-regulated colony! I am satisfied they have a good queen. The last season was the poorest I have ever seen in this part of the country, but we hope for a good honey crop this year.

T. C. Kelly.

Slippery Rock, Pa., Feb. 27, 1891.

Bees in Fine Condition.

I have been engaged in bee-keeping for only three years, having commenced with 3 colonies, and increased to 31 by natural swarming. Last year I secured 500 pounds of white clover honey from 17 colonies, all in one-pound sections. I winter on the summer stands, and my bees are in fine condition at this date. Bees are doing well in this vicinity.

Wm. Housel.

Wertsville, N. J., Feb. 26, 1891.

Bees at the State Fair.

On page 294, Aaron Coppin says, in reference to the Illinois State Fair: "Aaron Coppin was the owner of every colony of bees on exhibition." Now, the average reader, or one not acquainted with the facts, would think he owned all of the bees at the Fair; here is a list of the bees exhibited, as near as I can remember: Hammond and Kimball, each, 7 one-frame nuclei; John Short, of Peoria, 6 one-frame nuclei; S. F. & I. Trego, Swedona, Ills., 4 one-frame nuclei; Aaron Coppin, 2 full colonies—or were full colonies when they came, but they were badly used up before the Fair was over, thus showing the folly of trying to show full colonies. He also says he failed to discover that Messrs. Hammond and Kimball did not show all of their honey. Now, I helped them remove their boxes from the Agricultural Hall, and do not think over one-half of the boxes were empty. Mr. Coppin also says: "The bee and honey show would have been a very slim affair, except for the display of the exhibitors above named" (Hammond, Kimball and Coppin). I must say that he is correct; in fact "too much so." It would have been a slim show except for Hammond and Kimball, even had Mr. Coppin exhibited. I hope friend Coppin will not "sit down on me" too hard for writing this, for I consider it in self-defense, as Mr. C. has managed to hit me while striking at Mrs. Harrison. Our Winter loss, so far, is 2 colonies and 3 queens, but the worst month (March) is before us yet.

S. F. Trego.

Swedona, Ills., Feb. 28, 1891.

Dampening Sections.

On page 265 of the Bee Journal, is an article from E. C. Eaglesfield, under the head of "Dampening Sections," in which he says if any one has a better way than his own, he would be glad to know it. I dampen them by placing the sections the same as he does; then, to avoid wetting the sections where it will damage or color them, I use a stick 6 inches long, with a rag or sponge wrapped around the upper end: the lower end being cut to the shape of a pen, will just fit down into the bottom of the grooves, depositing the water just where it should be. By keeping the sponge or rag wet, while drawing the stick across the sections, you can regulate the wetting by squeezing the rag, which is in your hand, as the water will run down the stick. John A. Ward.

Conroy, Iowa, Feb. 28, 1891.

Gathering Pollen Now.

Four years ago I purchased 4 colonies of black bees, thinking that about the right number to start with, but I received no surplus honey, nor did any of the colonies cast a swarm. The following Spring I transferred them to movable-frame hives, but with little better success, and I became discouraged. In the Spring of 1889, I purchased 2 Syrian queens for a trial, and was very well pleased with the results. Last Summer, I re-queened the remainder of my colonies, and in about three weeks the new brood began to come forth. I did not expect very much surplus, and was surprised to find that within four weeks from the time the yellow bees made their appearance, the hives were growing heavy. This was in July, and I extracted 45 pounds of white clover honey from 4 of my best colonies, and one swarm had filled the frames by June 10. The last week in September I extracted about 70 pounds of honey, and just eight days later extracted some 70 pounds more from the same colonies. The honey was as fine as any I ever saw. It was gathered from stick weeds, and granulated in a short time. I made one artificial swarm, which is in good condition at this time, and wintering well. All my bees are on the summer stands; the weather is warm, and they are gathering pollen. A. C. BABB.

Greenville, Tenn., Feb. 16, 1891.

Bees Carrying Pollen.

Last Spring we had 22 colonies of bees, and they increased to 36 colonies during the season, giving us $50 worth of comb-honey, in one-pound sections. We wintered our bees on the summer stands. I had a partner until this Winter, but on Jan. 26, we dissolved the partnership, dividing the bees between us. Up to that date we had lost 4 colonies, but the remainder bid fair to winter in good condition. I have 16 colonies of bees now, and they were carrying pollen on Feb. 16.

Idlewood, Ills. J. ROBERT ALLEN.

Dampness of Winter Quarters.

My bees are wintering in a detached stone house, the floor of which is 2 feet below the level of the surrounding ground. It contains a living spring, is banked on the outside, and the floor and inside of the walls are cemented. The temperature averages 41°, and the hives stand about 10 inches from the floor. On Feb. 24 we had a freshet, and the house was filled with water to within 3 inches of the combs of the first tier of hives, which are tiered up three high. What effect will this have on wintering? There are 75 colonies in the house, and they cannot be removed to the summer stands before the latter part of April.

DAVID R. FARQUHARSON.

Walton, Ont.

[Dampness is not harmful to bees in winter quarters, if the temperature is kept as high as 40°. Should the water get into the hives and drown the bees, of course the case would be different.—ED.]

First of the Season.

On Feb. 16 the bees carried the first pollen of the season from the soft maples. They were working finely on Feb. 16 and 18, but have not worked since. The drouth did not hurt the clover at all, and there is a fine outlook for a good honey crop this year. I have been on the "sick-list," with sciatic rheumatism, and was unable to sleep for four days and nights, but am a little better to-day. L. WERNER.

Edwardsville, Ills., March 6, 1891.

Could the Stock be Kept Pure.

I have 30 colonies of bees, and all seem to be wintering well, except one colony which have spotted the front of their hive very badly. Last Spring I took out of winter quarters, 16 colonies; increased to 32 colonies, and sold 410 pounds of honey, which was a very poor showing, but think I can do better next season. I would like to ask, if I should introduce an Italian queen into one colony, could I keep the stock from that colony pure, if kept in the same apiary? There are two apiaries within half a mile of mine. Now, could I keep pure stock with these surroundings?

Chetek, Wis. GUY KELLOGG.

[If the queen introduced is a purely fertilized Italian, all of her progeny will be pure, no matter what the "surroundings" are. You could not rear pure queens, if impure drones are near your apiary.—ED.]

Alfalfa Pasturage.

On page 261, J. W. Carter says: "I have the advantage of 3,000 acres of alfalfa meadow," and asks, "How many colonies should it support?" Then the editor asks, "Will some of our Colorado bee-keepers give us their opinion?" I have had but one season's experience in the alfalfa region, but here is my opinion: The alfalfa is a very rapid growing plant, and much larger and coarser, by perhaps ⅓ to ½, than the red clover. If cut for hay, it is cut just as it comes into bloom. If left until in full bloom, it becomes too hard and woody for good hay. If wanted for seed, it is not cut until Fall. It begins to bloom just a trifle later than red clover, and if not cut, it will continue to bloom until frost; having seed and bloom at the same time. Now, if the range be only meadow cut for hay, it affords but little pasturage for bees.

Besides the seed crop, there is one other source of alfalfa pasturage. Where wheat is grown on alfalfa sod turned under, there is usually a large amount of the alfalfa growing in the wheat, and as the wheat harvest does not come until after the first hay harvest (here it comes almost with the second hay harvest), there is considerable honey gathered in the wheat fields. Often there is almost enough alfalfa seeds harvested and threshed with the wheat to pay the threshing bill. So you will see it depends. Acreage alone does not tell the story; but the question is, how much is allowed to reach maturity, for that which is cut for hay does not reach the age for secretion of nectar. Alfalfa is but little pastured by stock, as it will not bear much pasturing, so that no alfalfa honey is gathered from pastured fields. Alfalfa honey is *fine*, and the plant a good honey plant, but do not leave good localities just to go where alfalfa is grown. R. C. AIKIN.

Ft. Collins, Colo.

No Honey After July 15.

Although I do not think that I have lost any colonies, as yet, I am not wintering my bees with my usual success this year, which I attribute to the fact that they gathered no honey after July 15, and were imperfectly fed in the Fall. My college duties do not allow me to give my bees a great amount of attention. ALLEN LATHAM.

Cambridge, Mass., March 3, 1891.

Honey Sold for $12,000.

At present I have 160 colonies of bees in the cellar, all alive and doing well. I have a beautiful location, 60 rods from the depot, and 40 rods from the post-office, with timber on all sides. During the past 16 years I have produced a little over 142,000 pounds of merchantable honey, which I sold for about $12,000. J. E. CADY.

Medford, Minn., March 6, 1891.

Bees Wintering Poorly.

Bees in this vicinity went into winter quarters in poor condition, last Fall, being short of stores, unless they were fed. I fed mine what I considered enough for Winter's supply, and most of them were alive a few days ago, and apparently wintering well. Among my acquaintances are a dozen or more bee-keepers, most of whom are using the old-fashioned box-hive, and very few of them fed their bees, the result being that ten of them have already lost all of their colonies. Bees will be scarce here in the Spring, and to those who are lucky enough to carry them safely through the Winter, they will be worth something. J. P. SMITH.

Sunapee, N. H., March 3, 1891.

Organized a Local Society.

On March 3, twelve of the bee-keepers of this neighborhood met at my house, and, after discussing matters pertaining to bee-keeping, and its interests, we organized a local association, to be known as the Brookfield Bee-Keepers' Association. Lorin Stariclift was elected President, and J. G. Banning, Secretary. Mr. Stariclift is a veteran bee-keeper, and a quiet, unassuming, practical man. Our bees are wintering well so far. We had a warm, Spring-like day last week, and the bees were flying strongly. We hope for a good season this year.

JOSEPH G. BANNING.

Brookfield, Me., March 5, 1891.

CLUBBING LIST.

We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

	Price of both.	*Club.*
The American Bee Journal	$1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Guide	1 50	1 40
Bee-Keepers' Review	2 00	1 75
The Apiculturist	1 75	1 65
Canadian Bee Journal	1 75	1 65
American Bee-Keeper	1 50	1 40
The 7 above-named papers	6 00	5 00
and Langstroth Revised (Dadant)	3 00	2 75
Cook's Manual (1887 edition)	2 25	2 00
Quinby's New Bee-Keeping	2 50	2 25
Doolittle on Queen-Rearing	2 00	1 75
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 60	1 50
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	2 20
Western World Guide	1 50	1 30
Heddon's book, "Success,"	1 50	1 40
A Year Among the Bees	1 50	1 35
Convention Hand-Book	1 50	1 30
Weekly Inter-Ocean	2 00	1 75
Toronto Globe (weekly)	2 00	1 70
History of National Society	1 50	1 25
American Poultry Journal	2 25	1 50
The Lever (Temperance)	2 00	1 75
Orange Judd Farmer	2 00	1 65
Farm, Field and Stockman	2 00	1 65
Prairie Farmer	2 00	1 65
Illustrated Home Journal	1 50	1 35
American Garden	2 50	2 00
Rural New Yorker	2 50	2 00
Nebraska Bee-Keeper	1 50	1 35

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

ADVERTISING RATES.

20 cents per line of Space, each insertion.

No Advertisement inserted for less than $1.00.

A line of this type will admit about eight words.
ONE INCH will contain TWELVE lines.

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Special Notices, 30 cents per line.

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☞ On larger Advertisements discounts will be stated, on application.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

☞ Subscribers who do not receive their papers promptly, should notify us at once.

☞ Send us *one new* subscription, with $1.00, and we will present you with a nice Pocket Dictionary.

☞ The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to pay for another year.

☞ Systematic work in the Apiary will pay. Use the Apiary Register. Its cost is trifling. Prices:

For	50 colonies (120 pages)	$1 00
"	100 colonies (220 pages)	1 25
"	200 colonies (420 pages)	1 50

☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

Our Sewing Machine.—One who has purchased a Sewing Machine of us, as advertised on page 382, volunteers this statement:

> I am well pleased with the Sewing Machine you sent me; any person wanting a good Sewing Machine, one that is equal to the high-priced machines which are sold by agents, can do no better than to send for your $15.00 Machine. They will be agreeably surprised when they see it. Mine is really better than I expected.
> W. J. PATTERSON.
> Sullivan, Ills., Dec. 5, 1890.

☞ The Union or Family Scale has been received, and I am much pleased with it. W. H. KIMBALL.
Davenport, Iowa.

Bee-Keeping for Profit, by Dr. G. L. Tinker, is a new 50-page pamphlet, which details fully the author's new system of bee-management in producing comb and extracted-honey. and the construction of the hive best adapted to it—his "Nonpareil." The book can be had at this office for 25c.

Binders made especially for the BEE JOURNAL for 1891 are now ready for delivery, at 50 cents each, including postage. Be sure to use a Binder to keep your numbers of 1890 for reference. Binders for 1890 only cost 60 cents, and it will pay you to use them, if you do not get the volumes otherwise bound.

Supply Dealers should write to us for wholesale terms and cut for Hastings' Perfection Feeders.

☞ Red Labels are nice for Pails which hold from 1 to 10 lbs. of honey. Price $1.00 per hundred, with name and address printed. Sample free.

☞ Calvert's No. 1 Phenol, mentioned in Cheshire's Pamphlet on pages 16 and 17, as a cure for foul brood, can be procured at this office at 25 cents per ounce, by express.

☞ Please send us the names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you.

HONEY AND BEESWAX MARKET.

DETROIT, March 7.—Comb-honey is quoted at 14@15c; demand light. Extracted, 7@8c. Beeswax in fair demand, 27@28c.
M. H. HUNT, Bell Branch, Mich.

NEW YORK, March 7.—Market is bare of comb-honey. We quote: Extracted, buckwheat, 7@7½c; California, in good demand, at 6¾@7¼c, and market well supplied; Southern, none in market. Beeswax, 25@27c.
HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

KANSAS CITY, March 7.—The receipts of comb-honey are very light: our market will be well cleaned up by March 15. We quote: White 1-lb. comb, at 16@18c; California white, 2-lb., 14@15c; extracted, 6@7c. Beeswax, 22@25c.
CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CINCINNATI, March 7.—Demand is good for all kinds of honey, with a good supply on the market of all but Southern honey, which is scarce. Choice comb honey brings 16@17c per pound. Extracted honey, 6@8c.

Beeswax is in good demand at 24@26c., for good to choice yellow. C. F. MUTH & SON,
Corner Freeman & Central Aves.

CHICAGO, March 7.—Demand at present not very active on comb honey. Fancy white, 17c; white, 16c; white, 2-lb. sections, 14c; buckwheat, 1-lb. sections, 12c; extracted, 7@8c. Beeswax, 28c.
S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, March 7.—Fancy white 1-lb. comb, 18c; fair to good, 17c; dark 1-lb., 14@15c; 2-lb. white comb, 15@16c; 2-lb. dark, 13@14c; extracted, white, 7c; dark, 5@6c.
HAMBLIN & BEARSS, 514 Walnut St.

CHICAGO, March 7.—The volume of trade in honey is very small. A few of the best lots are taken at 17@18c; but where the condition and appearance of honey is a little off, 16c is about the top. The supply is not large, but there seems to be about enough for the trade. Extracted, is selling at 7@8c, with fair trade.

Beeswax, 27@28c.
R. A. BURNETT, 161 S. Water St.

BOSTON, March 7.—Honey is in fair demand; supply short. Fancy, 1-lb. comb, 19@20c; fair to good, 18@19c; 2-lb. sections, 16@17c. Extracted, 8@9c. There is no beeswax on hand.
BLAKE & RIPLEY, 57 Chatham Street.

ALBANY, N. Y., March 7.—Honey market is slow and unsatisfactory, stocks of comb-honey being light and prices unchanged; stock of extracted increasing. We are selling white at 16@18c; mixed, 14@15c; dark, 12@14c. Extracted, white, 8@9c; dark, 6@7c. Beeswax, 26@30c.
H. R. WRIGHT, 326-328 Broadway.

We send both the Home Journal and Bee Journal for 1891, for $1.35.

Supply Dealers desiring to sell our book, "Bees and Honey," should write for terms before issuing their Catalogues.

Back Numbers.—We want Vol. 2 of the AMERICAN BEE JOURNAL. Also No. 52 for Dec. 28, 1881; and No. 21 for May 21, 1884.

Any one having these for sale will oblige by sending a postal card to this office, stating price; and if not already supplied, we will negotiate for them.

The Convention Hand-Book is very convenient at Bee-Conventions. It contains a simple Manual of Parliamentary Law and Rules of Order for Local Bee-Conventions; Constitution and By-Laws for a Local Society; Programme for a Convention, with Subjects for Discussion. In addition to this, there are about 50 blank pages, to make notes upon, or to write out questions, as they may come to mind. They are nicely bound in cloth, and are of the right size for the pocket. We will present a copy for one new subscription to the BEE JOURNAL (with $1.00 to pay for the same), or 2 subscribers to the HOME JOURNAL may be sent instead of one for the BEE JOURNAL.

The "Farm-Poultry" is a 20-page monthly, published in Boston, at 50 cents per year. It is issued with a colored cover and is finely illustrated throughout.

We have arranged to club the AMERICAN BEE JOURNAL with the *Farm-Poultry* at $1.35 per year for the two. Or with the ILLUSTRATED HOME JOURNAL at $1.75.

If you have a desire to know how to have Queens fertilized in upper stories, while the old Queen is still laying below—how you may *safely introduce* any Queen, at any time of the year when bees can fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact, everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and is as interesting as a story. Price, bound in cloth, $1.00. For sale at this office.

Clubs of 5 New Subscriptions for $4.00, to any addresses. Ten for $7.50.

There is an Old Saying that "there is nothing sure in life, except death and taxes," but the saying loses its force when Salzer's seeds are included among the uncertainties. They never die, and only need a trial to prove themselves. John A. Salzer, of La Crosse, Wis., is the largest grower of Northern Grown Seeds, and makes a specialty of farm seeds, wheat, corn, oats and potatoes. An illustrated catalogue, contains full information regarding rare plants, flowers, fine vegetables, etc., with several colored plates, mailed for 5 cents, or further information can be had by reference to advertisements of Salzer, which are appearing in our columns.

◆

Our "Wavelets of News" is crowded out this week.

◆

The Convention Hand-Book is received, and I am well pleased with it. Every bee-keeper should have a copy.

CHARLES WHITE.
Farmers' Valley, Nebr., Mar. 3, 1891.

◆

Do not send to us for sample copies of any other papers. Send for such to the publishers of the papers you want.

◆

☞ When talking about Bees to your friend or neighbor, you will oblige us by commending the BEE JOURNAL to him, and taking his subscription to send with your renewal. For this work we will present you with a copy of the Convention Hand-Book by mail, postpaid. It sells at 50 cents.

Wants or Exchanges.

Under this heading, Notices of 5 lines, or less, will be inserted at **10 cents per line,** for each insertion. when specially ordered into this Department. If over 5 lines, the additional lines will cost 20 cents each.

WANTED—To exchange 1-lb. thin Vandervort f'd'n for 2 of wax. Samples and testimonials free. C. W. DAYTON, Clinton, Wis.
8A10t

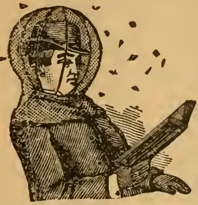
FOR EXCHANGE—One 10-inch Foundation Mill, new; will exchange for Bees by the pound, and Foundation.
10A2t L. L. ESENHOWER, Reading, Pa.

EXCHANGE—Circular of Bees, Fixtures, Poultry, Seeds, etc., for your name and address on a postal. F. SCOTT, Cloud, Ohio.
11A1t

WANTED—A good farmer. Write to R. E. PARCHER, Wausau, Wis. 11A2t

The "Globe" Bee Veil

Price, by Mail or Express, $1.00.



There are five cross-bars united by a rivet through their center at the top. These bars are buttoned to studs on the neck-band. The bars are of best light spring steel. The neck-band is of best hard spring brass. The cover is of white bobinet with black face-piece to see through.

It is very easily put together; no trouble to put on or take off; and folds compactly in a paper box 6x7 inches, by one inch deep. The protection against bees is perfect—the weight of the entire Veil being only five ounces.

CLUBBING OFFER.

We will send this Veil and the Bee Journal one year for **$1.75.** Or, we will give the Veil **Free** for three (3) **New** Subscribers to the Bee Journal, with $3.00 to pay for them.

Subscriptions to the Home Journal may be included in all Clubs, counting two (2) Home Journals as equal to one (1) Bee Journal.

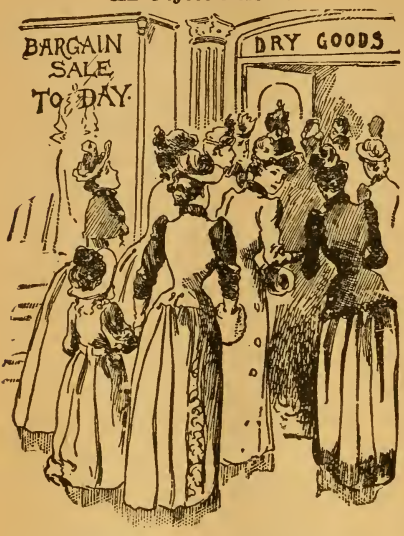
THOMAS G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

UNITY A RELIGIOUS WEEKLY
Rational Yet Reverent.
For those who believe in Religion, but question miracles, and everlasting punishment, and fail to see the justice in schemes of vicarious atonement. UNITY stands for a Religion that is rational and a rationalism that is religious, and for a religious fellowship that welcomes all who wish to work together for the advancement of Truth, Right and Love in the world. 32 columns, including a sermon every week. $1.00 a year, but to a new subscriber, mentioning this advertisement, it will be sent a whole year for 50 cents.
CHARLES H. KERR & CO., Pubs., 175 Dearborn St., Chicago.
8A4t
Mention the American Bee Journal.

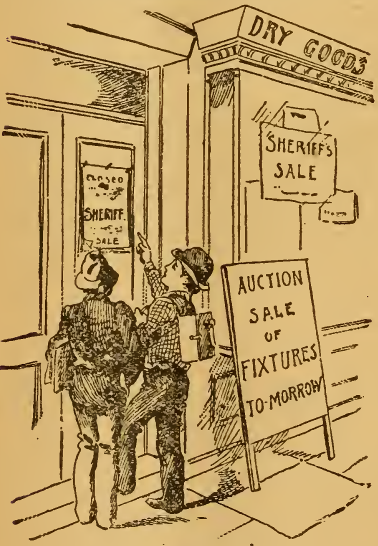
The Best of all Cauliflowers!
Is the sort now sent out for the first time, the Perfection. The Snowball, Gilt-edged and Extra-early Erfurt, are all excellent sorts, but an extensive market gardener, who has raised these and all other sorts, believes that within 3 years the most enterprising market gardeners will have dropped these, and be raising Perfection. Trial package, 25 cts.; per oz., $4. Seed Catalogue **FREE** to every one.
J. J. H. GREGORY & SON, Marblehead, Mass.
Mention the American Bee Journal.

Voice of Masonry and Family Magazine.
Three years a Paper and twenty-five a Magazine. Now unexcelled. Contains fine **Portraits and Illustrations,** and a great variety of articles, stories and poems for Freemasons and their families; also **Eastern Star, Masonic Gleanings and Editorial Departments.** Price per year, $3.00.
JOHN W. BROWN, Editor and Publisher,
182 & 184 S. Clark Street, Chicago, Illinois.
Mention the American Bee Journal.

An Object Lesson.



THIS MERCHANT ADVERTISED.



THIS ONE DIDN'T.

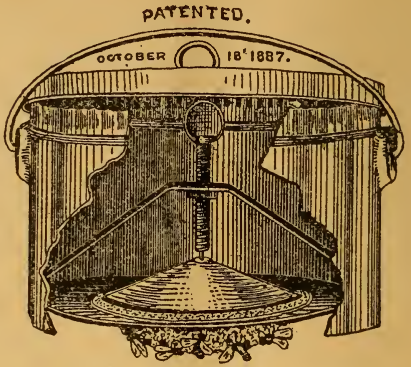
British Bee Journal

AND BEE-KEEPERS' ADVISER.

IS PUBLISHED every week, at **6s. 6d.** per annum. It contains the very best practical information for the apiarist. It is edited by Thomas Wm. Cowan, F.G.S., F.R.M.S., etc., and published by John Huckie, King's Langley, Herts, England.

Mention the American Bee Journal.

Hastings' Perfection Feeders



THESE FEEDERS are now made with a capacity of two quarts, and the price is reduced to **30 cents** each, or $3.00 per dozen, by express or freight. When ordered by mail, add 10 cents each for postage.

These Feeders can be re-filled without moving the Feeder, or disturbing the bees. The letting down of food is regulated by a thumb-screw. It is easy to regulate—either a quart or a spoonful can be given in a day or an hour, as may be required, and where it is most needed, over the cluster of bees. For rapid feeding, two Feeders may be placed over the bees at one time, not a drop of food can be lost, and robber bees cannot get at it. Special rates to dealers. Write for prices.

THOS. G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

Thousands of customers in every State will testify to the quality of **VICK'S SEEDS.** Don't be annoyed with inferior goods. **Vick's Floral Guide,** the best issue ever printed, contains 100 large pages, colored plates, **Grand Novelties,** worthy of cultivation. Send 10 cents for copy, deduct this amount from first order and it costs nothing. Cash prizes $1000 and $200.

JAMES VICK SEEDSMAN, Rochester, N. Y.

The New Tomato

From Canada ought to be extra early, and as such it is sent out. The reports of the experimental stations speak highly of it, and numbers testify to its earliness, productiveness, large size, roundness, rich color and freedom from rot. Per package, 15 cts.; five for 60 cts. You will find it only in my seed catalogue, which will be sent **FREE** to anybody.

J. J. H. GREGORY & SON, Marblehead, Mass.

FREE HOMES At the rate they have been going the Public Domains will all be gone in 5 years. Now is the time to secure as Rich Land as the Sun shines on at **$1.25 per acre.** What better could be left for Children? Where these Lands are; how to get them, as well as for information of all States and Territories, send **10 cents** and receive the beautiful Engravings, a Picturesque Panorama of the United States. Address **THE WESTERN WORLD, Chicago, Ill.**

THE AMERICAN BEE JOURNAL
CIRCULATES
ALL OVER THE WORLD
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVII. March 19, 1891. No. 12.

Editorial Buzzings.

Mr. R. R. Ryan has gone from Nebraska to Oregon, where he will more extensively enter into the pursuit of honey production.

◆

Remember the *sad* experience of last season ! Every one should order all the Supplies necessary for the Apiary *at once*, and avoid "the rush." The delays and annoyances of last year should teach a valuable lesson in this line.

◆

Congress has adjourned. Among the unsuccessful measures, we mention the "Paddock pure-food bill," providing for the branding of all food compounds and adulterations. This ought to have become a law, but among the 14,033 bills introduced in the House, and 5,129 in the Senate, it was lost. In the Fifty-first Congress, just adjourned, the largest mortality occurred ; three Senators and twelve Representatives having died during the term.

The Illinois Legislature having elected a United States Senator, will now begin its routine business. The appropriations for the World's Fair will be brought up at an early day. The State Bee-Keepers' Association asks for $5,000 for its Columbian Fair exhibit. Now it will be necessary for every bee-keeper in the State to write to his Reprentative and Senator *at once*, asking them to vote for the appropriation. Do it now, before you forget it.

◆

While Dr. Miller has induced brother Hutchinson to substitute "I" for "we" in his editorials in the *Review*, we observe that in *Gleanings* the more desirable "we" has obtained the endorsement of Ernest, on account of the plurality of editors. It looks much better every way, and has the endorsement of many centuries.

◆

Report of the Toledo Convention.—Some have inquired why the Toledo Convention report has not yet been published. We reply, because the Secretary, Miss Dema Bennett has been laid up with *La Grippe*, and has been unable to write it out. We received the report of the first day's sessions after this week's JOURNAL was filled up. It will appear next week, and the rest of it as soon thereafter as possible.

◆

The Cold Weather of the past week has been general all over the continent of North America. Even Texas reports the coldest weather within the memory of the oldest inhabitant. This retards Spring weather, and will probably prevent the early budding of fruit-trees, and the consequent danger of damage to them by late frosts. If pleasant weather prevails during fruit-bloom, the bees will obtain considerable honey for brood-rearing, and in return will fertilize the blossoms, and plentiful crops of fruit will be the result. We hope for such a favorable condition of things.

The Illinois State Association.—In a recent letter from Dr. C. C. Miller, he remarks thus:

> I was sorry that I could not attend the convention at Springfield, but was not able at the time to sit through a convention, if an air-ship had carried me there. I do not know what is contemplated as to future meetings, but I think the arguments given on page 319, by Mr. Heddon, well worthy of consideration. There may be stronger arguments in favor of meeting at Springfield, and it will be well for some one familiar with the ground to state the case. My own opinion is, that we would have larger conventions at Chicago, but "the wish may be father to the thought."
>
> C. C. Miller.

Nothing was said about any place for holding conventions, except that the next meeting is to be held at Springfield in December, when the other farmers' meetings are held.

◆

Illinois Exhibit at the World's Fair.

Mr. C. P. Dadant offers the following suggestions concerning the apiarian exhibits of the State of Illinois, at the World's Columbian Fair. These remarks will supplement what we gave last week on the same subject-matter as reasons for asking for an appropriation, on page 342:

> In the consideration of the profits derived from bee-keeping by the State, it is most important to state that bee-culture is an industry which requires but little capital, and which, however, takes from territory already occupied, a very valuable product which would otherwise be wasted. There is no other production of the farm, to my knowledge, which can make so valuable a claim. Millions upon millions of pounds of honey are wasted every year, among meadows as well as in the swamps, for want of bees to gather it, and the only thing that is needed to gather those wasted sweets is encouragement to the pursuit of bee-keeping.
>
> Congress has seen fit to allow 2 cents per pound to producers of sugar, and we can see no reason why producers of honey should not be similarly encouraged. Their pursuit is of more practical importance than that of sugar-growing, for they need no specially cultivated lands for their purpose.
>
> In regard to the use to be made of the money solicited from the State, I think that provisions should be made for a bee-exhibit, an implement exhibit, and a product exhibit, which ought to be placed under the direction of three able apiarists, and may be arranged to be placed in the same location with bee-exhibits of other States if necessary. But as Illinois is the State in which the Fair is taking place, Illinois should also be the State to make the largest and best display. I think exhibits should be solicited from apiarists all over the State, and taken care of by State provision, although they ought to be furnished free of charge, and the name of each exhibitor should be placed upon his goods.
>
> A well-made exhibit ought to encourage the pursuit, as well as to do honor to our State before the world. It will not be difficult to make a beautiful Show, if we let all apiarists know that their goods will be well taken care of.

Mr. Dadant also suggests that honey be provided sufficient to give a taste to all who desire to sample the honey of this State.

> The consumption of honey would be much greater, if it was not for the prejudice that a great many people entertain in regard to the purity of our honey. It would be a very important point to have men to represent our industry at the Fair who understood the honey question, and who would be able to enlighten the visitors as to the quality and purity of granulated honey. Large quantities ought to be donated by bee-keepers at large for the purpose of allowing the visitors to taste this product, as was done at London by the Canadians. There is a great benefit to be derived by bee-keepers from such a course.

◆

Hive and Frame Clamp.—G. T. Gunn, of Wall Lake, Iowa, has sent to our Museum one of his hive clamps. It is very substantial, and holds a hive, or frames, together with a vise-like grasp. He describes it thus:

> It is made of wood and iron. There is no need of cleats on the side-board of the hive, as the clamp holds the board firmly to the frames and keeps the board from warping. It also stops robber-bees from entering the cracks, and acts as an end-board, keeping the sun and rain from the frame-ends. It will fit a hive of any depth.

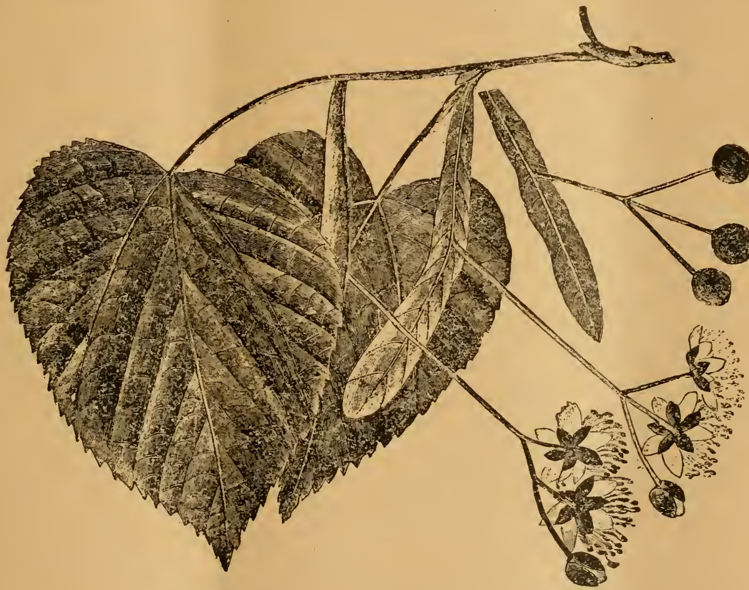
Basswood or Linden Trees.

The American basswood tree excels in beauty almost all others, and it is well known that it furnishes a large amount of excellent nectar.

Its rank, thrifty growth, large, glossy-green leaves, delightfully perfumed flowers, adaptability to almost any soil and climate, and the ease with which it can be cultivated, make it one of the most desirable for lawn or lane. It is easily propagated from the seeds or cuttings, and can be transplanted with certainty, and may be obtained with little trouble. It blooms in early July, and yields a white, aromatic honey, of superior quality.

In *Gleanings* for Feb. 15, Mr. Ernest R. Root gives an engraving of it (which is here reproduced), and thus remarks concerning it :

> Our artist, who was looking over some beautiful plates in a standard work in one of our public libraries, accidentally ran across a representation of basswood. It was so accurate that we instructed him to copy it, as faithfully as he could, by a wood engraving, and we give the result below.



AMERICAN BASSWOOD, OR LINDEN.

> The same thing is what the Canadians call "linden," and we across the line, as a general rule, term it *basswood.* There is no difference, but climatic influences have their effect upon it. Among the hills of New York State, the leaves assume mammoth proportions. I measured one that was 14 inches long. While this leaf was among the largest, yet the leaves were, on the average, about twice the size of those in our own locality.
>
> In Illinois I noticed that the basswoods seemed to be less thrifty than in Ohio. The leaves seemed to be smaller, and the bark of the trees of a little different appearance.
>
> The engraving represents quite accurately the typical forms, however. The European variety has smaller leaves, and differs from *Tilia Americana* in a few other minor respects.
>
> It is rather to be regretted that this tree is not more plentiful than it is. It is one of the main stays, where it grows, of the honey-producer, and one of the most valuable woods in manufacture. It will hardly do for outside exposure to the weather ; but it is admirably adapted for packing-boxes, and is used in *immense* quantities in the manufacture of furniture, forming the bottoms and sides of drawers, the backs of bureaus,

dressing-cases, etc., and it is also employed extensively in the manufacture of paper.

It has often been said that we are cutting off our own noses in using it for one-piece sections—that we are "killing the goose that lays the golden egg." Well, it is true that apiarian-supply dealers may use quite a little; but still, the amount that *they* use is very insignificant in comparison with that employed by furniture makers, packing-box concerns, and paper makers.

After all, there is one redeeming feature—basswood is a very rapid grower. If basswood will replace itself in ten, or even twenty years, so that it can be used again for lumber, there is yet hope that it may continue to bless the bee-keeper.

◆

Father Moore—he was familiarly known by this name by a large circle of acquaintances—has departed this life. We mean William W. Moore, of Gillett, Clay county, Iowa. He died on Oct. 2, 1890, at the advanced age of 78 years. His brother, Peter M. Moore, sends us a photograph, and the following concerning our deceased friend:

> His health had been failing for three years, although he had been able to do the principal part of the work in his apiary. Last Spring he made 40 new hives and their frames, but in September was compelled to relinquish his work to others. He was a great lover of bees when a young man, and reared black bees for several years, in Ohio, and experimented on different patterns of hives.
>
> When he came to Northwestern Iowa, 24 years ago, he brought the first bees into the Little Sioux Valley. They were black bees. He lost his first bees soon, they being injured in shipping, having to be carried 75 miles in a wagon. His second effort was successful, but he lost all his colonies the second Winter, not having become sufficiently acquainted with and prepared for the rigors of this climate.
>
> Then he secured another start of Italians. With these he had fair success, and imported a queen from Milan, Italy, thinking to improve them, but lost her, and all but three of his colonies, in the hard Winter of 1880. Then he bought two more colonies.
>
> Being so isolated, he kept his strains pure, and increased his colonies from 50 to 80—all he cared to keep. These bees were indeed his pets.
>
> His location was in a native grove, on the Little Sioux River, and, perhaps, had some advantages over the surrounding prairie. But his success was encouraging to the people on the prairie, and he supplied them with a start in the business, within a large circle. He was an ardent student, and educator in the science of apiculture, being our oracle on bees, and had placed delicious honey, extracted and in the comb, before the people in so many meetings and conventions, and in the markets here, in such a way as to prove its value over the sweets of commerce, and he so firmly established its purity, and his honesty, that hundreds of people wanted Father Moore's honey.
>
> He was much attached to the AMERICAN BEE JOURNAL and its editor, and had such a fraternal feeling for all bee-rearers, and writers on the subject, that I take pleasure in sending his photograph. PETER M. MOORE.

◆

La Grippe holds almost universal sway in this locality. Every mail brings intelligence of apiarists all over the country being within its terrible grasp. The editor of the BEE JOURNAL has suffered much from it this Winter, but fortunately not so much as he did last year. To show the strong *grip* it has on Chicago, the following from the *Herald* of the 12th inst. is appended:

> Everybody has the grip. The disease is ravaging the city. The county hospital is full of patients with it. Pneumonia frequently follows it, and the mortality is great. West Side street car men are all affected with it, and all the "extras" are being called into service. The police force is being thinned by it.
>
> It is playing havoc at the Government building. Monday it seized upon about 25 letter-carriers, and Tuesday 40 were unable to report for duty. Seventy-five Postoffice employes were off duty on Tuesday. Altogether about 125 people employed in the building are affected.

◆

Do You Want a Tested Italian Queen free of cost? Jacob T. Timpe offers one of his five-banded Golden Italians as a present for the first order for his Potatoes, from any State. This is a rare opportunity to obtain a valuable Queen. See our advertising columns.

Queries and Replies.

Rag-Weed and Honey.

QUERY 757.—Does rag-weed produce honey in sufficient quantities to benefit the bee-keeper.—E. P. G.

No.—MRS. L. HARRISON.

I think not.—EUGENE SECOR.

I think not.—J. M. HAMBAUGH.

Not that I know of.—G. L. TINKER.

We do not have it in my locality.—J. E. POND.

Yes; for every drop of honey is a benefit.—A. B. MASON.

I never saw a bee on it. Its use is yet to be discovered.—A. J. COOK.

The bees gather a little pollen from it here, but no honey I think.—R. L. TAYLOR.

It produces an abundance of pollen, but, as far as I have observed, no honey.—M. MAHIN.

Not a drop here; but it produces lots of pollen, and, I guess, "hay fever," too, as it is called.—JAMES HEDDON.

No; it produces nothing but a very bitter kind of pollen, that the bees work on to some extent.—C. H. DIBBERN.

In my locality it produces "hay fever," but I do not think that it produces honey enough to "wad a gun."—H. D. CUTTING.

I do not think, from my observations, that it yields a bit of honey; but it does afford an abundance of pollen.—J. P. H. BROWN.

It produces large quantities of pollen; but I do not believe it gives much honey. Sometimes, however, pollen is of more consequence than honey.—C. C. MILLER.

Bees do not get honey from rag-weed, here. In some seasons they gather pollen from it; but if I could have my say, I would have every spear of it exterminated.—G. M. DOOLITTLE.

Rag-weed is good for nothing but to give the "hay fever" to some persons. I know it, for this vile weed compels me to go to Sturgeon Bay, Wis., every year, in August, to avoid the disease.—CHAS. DADANT.

Our bees gather pollen some seasons from the rag-weed, but it is not a common thing to see bees working on the bitter weed. Last season I saw my bees gathering pollen from rag-weed for only two or three days, and then I saw no more of it. The rag-weed secretes no nectar, in my locality, for if it did, my bees would not be idle, as they are, in July and August.—G. W. DEMAREE.

Though it yields pollen, it cannot be classed with honey-producing plants. It is a vile weed, and should be exterminated.—THE EDITOR.

☞ The American Museum of Natural History in the Central Park, New York city, occupies a noble pile of buildings, the recent additions to which are just approaching completion. It is an institution in which every American ought to take pride. The most complete description of its treasures, and the educational work it is doing, is given with abundant pictorial illustrations, by Mary Titcomb, in the April number of Frank Leslie's Popular Monthly.

We Club the American Bee Journal and the Illustrated Home Journal, one year for $1.35. Both of these and Gleanings in Bee Culture, for one year, for $2.15.

Convention Notices.

☞ The Southwestern Wisconsin Bee-Keepers' Association, will hold its next Convention in the Court House, at Lancaster, Grant Co., Wis., March 25, 26, 1891. All who are interested in bee-culture and convention-work are cordially invited to attend. The topics for essays and discussions were enumerated on page 183.

BENJAMIN E. RICE, Sec., Boscobel, Wis.

☞ The 13th annual session of the Texas State Bee-Keepers' Association, will be held at Greenville, Hunt Co., Texas, on April 1, 2, 1891. All interested are invited. J. N. HUNTER, Sec.

☞ The 8th semi-annual meeting of the Susquehanna County Bee-Keepers' Association will be held at Montrose, Pa., on Thursday, May 7. 1891.

H. M. SEELEY, Sec., Harford, Pa.

☞ The Fourth semi-annual meeting of the Missouri State Bee-Keepers' Association, will meet at Boonville, Mo., on Thursday and Friday, April 9, 10, 1891. There are quite a list on programme for essays, including some from ladies. A cordial and pressing invitation is extended to all bee-keepers, and their wives and daughters, and any other ladies, to attend the Convention. Rates have been secured at the two leading hotels for those in attendance. Come, and let us get acquainted, and have an interesting meeting. J. W. ROUSE, Sec., Mexico, Mo.

Wavelets of News.

Essays at Conventions.

Short, pithy, well-written essays, suggestive of several good points, are always in place at conventions: long-winded ones, never. A long essay, however, may be valuable in proportion to its length. But it taxes the nerves a good deal more to listen to something read than something given off-hand, in animated, conversational style.—*Gleanings.*

* * *

Influence of Free Sugar on Honey.

After April 1 next, the present duties on foreign sugar, which average 2¼ cents per pound, will no longer be imposed, and a bounty of 2 cents a pound will be paid on sugar made in this country. This will certainly lower the price of sugar, and probably have some effect upon the price of honey, more particularly upon the lower grades of extracted honey, now used by bakers and other manufacturers. Comb-honey is a thing of itself; in one sense it has no competitor, in another it has. Cheap sugar will encourage the production of fruit preserves, and they will compete, to a certain extent, even with comb-honey. There is also another light in which this matter may be viewed. Sugar may become so cheap that it will be more profitable than ever to force all the white honey into the sections, and feed sugar for winter stores. I know from experience that, with the proper methods of management, and the right kind of feeders, this can be done very easily and cheaply. The obstacle in the way of using sugar for winter stores *has been* its high price.—*Review.*

* * *

To Keep Bees from Watering-Troughs.

Among some of the good things we learned at Keokuk, last Fall, was a little hint worth remembering, from A. N. Draper. He is an extensive honey producer—a man who owns several out-apiaries. Said he, "People have had a good deal to say about keeping bees away from watering-troughs. I will give you a secret that is worth them all. Take a weak solution of carbolic acid, and paint it around the edges of the trough, and then they will not bother your neighbors. If you get them out of the habit of visiting such places, they will stay away." We have used enough carbolic acid in the apiary to feel pretty tolerably certain that this will work. Put this down in your note-book, and try it next season and report.—*Gleanings.*

* * *

Sweet Clover for Honey.

M. S. Roop, of Council Bluffs, Iowa, writes us that bees are wintering very well in his vicinity. He says: "I have reports from about 20 bee-keepers, and their loss will not exceed 5 per cent." "Do you have any of the sweet clover growing in your country, it is the best honey plant in America." "It is as much ahead of alfalfa as alfalfa is ahead of buckwheat."—*Nebraska Bee-Keeper.*

* * *

Only Straight Combs for the Market.

It does not seem as though very much of a summing up is needed upon the separator question. I think all will admit that only straight combs ought to be put upon the market. If the condition of the honey flow and colonies, or of the management, result in straight combs without separators, then they are a useless expense, otherwise they ought to be used. Combs need not necessarily be as straight as a board, but so straight that they may be readily removed from the case without injury. If a bee-keeper can secure nearly all straight combs without separators, and has a local market—in which he can sell direct to consumers—for the few bulged combs that he may have, separators would be a useless expense.—*Review.*

* * *

Dadant's Langstroth in French.

We notice, by the last *Revue Internationale*, that this great work of our esteemed and celebrated co-laborer is at last ready for the French-speaking people of the world. It will be ready for sale on the first of March, just as this reaches our readers. We are informed that it will not be simply a word-for-word translation, but an adaptation of the book as a whole to the people of France, Mr. Dadant's native country. We predict that it will create a great stir, if not a revolution, in at least some districts of France. We have not learned the price of the book here in America. The price is 7½ francs in Nyon, Switzerland, at the office of the publication named above.—*Gleanings.*

* * *

The Rains in California have greatly improved the honey-crop prospect.

Topics of Interest.

Pollen Gathering by Queenless Colonies.

A. N. DRAPER.

In a recent number in the Query Department, the question was asked, "Does a queenless colony gather as much pollen as one with a queen?"

The question was answered by most of the authorities in the negative, though one or two of the answers partly gave my experience. I never had a colony queenless any length of time in the Summer, without the brood-combs were almost ruined by being jammed full of pollen.

I do not see how so many of the noted authorities have arrived at their conclusion. Of course, as the quantity of bees in a queenless colony is rapidly lessening, there are fewer bees to bring in pollen. This is the only reason that I am aware of that can be advanced for a queenless colony gathering less pollen. But in proportion to the quantity of bees I believe they bring in more pollen than one with a queen.

A few years ago I was greatly troubled with an excess of pollen. I found nothing in either books or bee-periodicals to help me out of the difficulty, so I began investigating to ascertain under what condition of the colonies the nuisance was the worst, and how it could be avoided, and I am satisfied that I have pretty thoroughly solved it; at least for this locality.

Leave no colony queenless. There are only two other conditions under which bees will store an excess of pollen. Either the queen is worthless from age or some other cause, or there comes a heavy yield of pollen when there is no honey in the flowers.

Now, where there is a contracted brood-nest, and the surplus has been removed, this contracted brood-nest is almost sure to be filled with pollen, and very little brood is reared, no matter what kind of a queen is in the hive.

In this locality, where we have white clover (it usually ceases to yield about June 10 to 20), and nothing more until the latter part of August or the first of September, the small brood-chamber is a complete failure, unless we resort to feeding during the whole of July and August. I have experimented on dozens of colonies, and in every hive I contracted during white clover bloom, the bees would fill the brood-nest with pollen during July, from corn tassels and horse weed; then, when the Fall flowers would bloom, there would not be bees enough to gather the honey. Then, again, the following Spring, if they had gathered barely enough honey to winter on, the pollen would be in the way of brood-rearing.

If there is any way of getting rid of it, except by rendering it into wax, I have never heard of it, and it is almost as much as the wax is worth to get it out of combs heavy with pollen.

Another trouble with the contracted hive is the wintering problem. My contracted brood-nest hives are hard to winter in, and I have noticed that nearly all the small-brood-nest advocates have trouble in wintering their bees.

Some lay the blame to too much pollen. If they would add to this, "and too few bees," they would have the wintering problem thoroughly solved, without resorting to sugar stores. I have yet to see a large brood-nest, on the "Dadant plan," with a vigorous young queen, overstocked with pollen, because there is lots of honey stored therein, and when the corn and horse-weed yield pollen, the empty comb, and that occupied with honey, is rapidly filled with brood; then, when the Fall flowers bloom, these hives are overflowing with young workers. There is a wonderful difference between them and a hive with a little, contracted brood-nest.

The following Spring, the difference is just as marked, for in this locality we have to make hay while the sun shines. Here, our crop of Spring honey is from maples, fruit trees, asparagus, and white clover, and frequently our honey weather is over by June 1.

A good, strong colony will breed up rapidly during March and April, while the colony in a small hive begins to get in shape by the time the crop is harvested.

If I was located where the white clover continued for a long time, or where there was a basswood yield, I might tolerate a small brood-nest. Just think, what a long time an apiarist has in which to get his bees in shape for a basswood crop of honey, and how a fellow has to hustle to get ready for a crop from raspberries and white clover by May 10.

With me, the best time to prepare for a clover crop is during July, August and September. The point is this: Keep vigorous queens, and see that there is honey enough in the brood-nest so that all pollen gathered will be used for brood-rearing, as gathered. If the brood-nest is small, feed regularly until you get tired of it; then get large hives and give them a trial.

Upper Alton, Ills., Dec. 27, 1890.

Eastern Iowa Bee-Keepers' Convention.

FRANK COVERDALE.

The second annual convention of the Eastern Iowa bee-keepers met in Maquoketa, Feb. 11 and 12, 1891, and was called to order by President Kimble, at 1 o'clock p.m.

C. M. Dunbar, of Maquoketa, in the absence of the Mayor, welcomed the bee-keepers to the city.

He stated that if there was any one branch of agriculture that he knew absolutely nothing about, it was that of bee-keeping, though he was very fond of their product.

In the absence of L. M. Stewart, of Monmouth, President Kimble called on Frank Coverdale, of Welton, to respond to the welcome, which he did as follows:

Mr. President and Fellow Bee-Men: We can well afford to plant ourselves in this fair city and spend two days, and hold counsel and discussion on this important branch of agriculture. Maquoketa may well feel proud, not only of her grandeur in architecture, her wide spread system of water works, electric lights, stone pavements, but of her energetic citizens and surrounding countrymen. She has been favored on the north with a widespread belt of timber and waterpower to run her mills. We gladly welcome all to come and share our comforts, and thank you for your liberal welcome.

After which the roll was called, and the reception of members took place.

The Secretary's report was read and approved.

The election of officers was by ballot as follows:

President, Wm. Kimble, of De Witt; Vice-President, H. S. Bowman, of Maquoketa; Secretary, Frank Coverdale, of Welton; Treasurer, L. J. Pearce, of De Witt.

In the absence of A. T. Wheeler, of Roseville, an essay by N. S. Samenger, on "Which is the Best Race of Bees," was read, followed by a discussion.

Wm. Kimble said Syrian bees were irritable, prolific; good to rear queens from. Carniolans no better for honey; not so good for rearing brood. Italians rear brood just when wanted, and are not so cross.

Henry Stewart, of Prophetstown, Ills., wanted Italians, but in good seasons black bees were just as good.

Wm. Kimble stated that he had worked ten years with the black German bee; made no success of bee-keeping until he got the Italian bee.

Next was an address by J. M. Jacobs, which was of vital importance to all present, on Marketing Honey, in which he stated that bee-keeping was just in its infancy, and we have the best honey gathering vicinity except that of California; that extracted-honey was as good as gold in the bank, for it would keep year after year; that honey must be put up in fancy shape for the city market; that some man of the association should handle all the honey; would not put one pound of honey in the hands of commission men.

Henry Stewart, of Illinois, had no trouble in disposing of honey with a good salesman; combined and shipped by carloads; put end of sections to end of car, it will ride all right; he had small lots smashed to pieces.

H. S. Bowman had more honey than he could dispose of on the home market; in one instance he shipped 34 boxes of honey, and 11 were reported smashed; on correspondence he found that the railroad company was all right, and made complaint to the commission men, and got full pay for all. Small quantities of honey get broken more; he brands all his honey; has a good trade.

Mr. Kimble had large experience in shipping honey from one Fair to another; had very little broken.

Discussion of hives next came up before the meeting. H. Stewart uses 9 frames in 12½ inch, inside measure; does not want closed-end frames; has tried them; they handle bad in cool weather; where one keeps out-apiaries, and roads are rough, he thinks closed-ends would be good; does not use porticos on his hives, they will be in the way; when using self-hivers, wants loose bottom-boards; when he wants tight bottom-boards, uses butter-tub hoops; wants shallow frames for extracting.

A. C. Lias wants all his frames of one size, so if he has any drone-comb it can be taken from the brood-nest and placed in an upper story to be filled with honey to be extracted.

J. M. Jacobs would not put his honey in any can or barrel that had contained foreign substances.

A. C. Lias uses 60 pound tin cans for honey; sells his honey to a cracker factory.

Adjourned until 6:30 p.m.

EVENING SESSION.

Meeting called to order by President Kimble.

Essential Quality in Bees. President Kimble looks well after the working quality of his bees; rears a docile strain. He has had swarms on his place like hornets; would not rear any stock from such.

Wintering bees came next in order.

H. Stewart supersedes all queens that do not do good work.

WINTERING.

J. M. Jacobs puts blocks underneath on the bottom-boards, so as to allow bottom ventilation; winters in the cellar to save honey, if nothing more.

A. C. Lias did not think it healthy to winter bees under dwelling houses; would have his cellar off to one side; has 90 colonies; gives bottom ventilation.

Manville Tarbox, of Olin, says you cannot freeze bees if you keep them dry; thinks wintering bees in a warm place takes away their hardiness.

W. E. Coe lost most of his bees when the bottom-boards were closed; keeps a temperature of 45°; likes lime in his cellar to absorb dampness; has no trouble.

Adjourned until Thursday morning.

MORNING SESSION—FEB. 12.

The meeting was called to order by the President, and a communication from President Secor, of the State Association, was noted, and laid upon the desk until afternoon session.

The subject of wintering bees was continued.

Thos. O. Hines, of Anamosa, winters in his cellar with burlap over his frames; 45°; he had to take his bees out the first of last March, because he could not control the temperature; run too high, though his bees did well.

H. L. Pangborn, of Maquoketa, winters in a dry cellar 6 feet deep; loses no bees; he thinks his bees do better in chaff hives, but he does not like them for summer use.

B. Crevelin tilts his hives well forward; gives top ventilation.

H. L. Pangborn has no trouble since practicing top ventilation.

G. Brown winters out-doors; packs in sawdust; has no loss.

Thos. Large winters in the cellar with proper temperature; no upward ventilation.

H. Stewart winters out-doors; puts his surplus case on top; fills it with autumn leaves; has them placed close together, and packs straw around them; winters his bees successfully; lets the sun shine on the fronts of his hives; he thinks that they rear brood much in early Spring, when treated as above; considers this of importance.

R. Reeding winters in cellars, with proper temperature; puts a nail under the honey-board for ventilation.

D. D. Hammond places on a burlap before carry them down cellar; would have his bees in a state of hibernation; does not want bees to rear brood while in the cellar; likes bottom ventilation.

E. Petch winters in a dry cellar; never loses a colony; no upward ventilation; proper temperature.

W. E. Coe's bees get weak in early Spring. Cool, damp weather is hard on them; thinks we must in some way overcome this.

PRODUCTION OF COMB.

H. S. Bowman thinks that honey doctors differ; he uses a 10-frame hive; wants Langstroth hives.

W. E. Coe has 10 and 8-frame hives side by side; can see no difference as to which produces most honey; thinks 8-frame handles more readily.

D. D. Hammond wants good queens, and plenty of heat and food while being reared.

Dilman Benton wants an 8-frame hive to produce comb-honey.

H. S. Bowman wanted to know what five-banded bees meant.

D. D. Hammond replied, "humbug."

At what price is foundation unprofitable?

H. Stewart thought for surplus honey he would pay $5 per pound, rather than do without; would not use it in brood-frames.

It was thought foundation in sections was indispensable, even at more than $5 per pound.

Many present preferred full sheets of foundation in brood-frames, and wired.

SECTION-CASES.

W. E. Coe wanted a combined case; would not re-pack.

Henry Stewart uses a case to protect his sections on all sides without a bee-space on top or bottom; has loose end-boards and follower. Remove these boards, and the sections remove easily.

H. S. Bowman thinks loose end-boards help to remove sections. He would re-pack all his honey for shipment and sort it; put his brand on it.

C. Reeding uses Pateson bottom follower board, and thumb-screws to tighten it.

Dilman Benton wants a case to hold six single tier wide frames, protecting the sections from all sides.

Thos. Large favors the same case; says he never saw any case that suited him so well.

The discussion of section-cases was a wide one. One gentleman from Illinois stated that this matter had, from time to time, been the cause of his bald head.

Adjourned until 1 o'clock p.m.

AFTERNOON SESSION.

Meeting was called to order by the President. Each member present enumerated his 1889 honey crop, which was of much interest, being about 80 or 100 pounds per colony, Spring count.

A large portion of the bee-keepers present were farmers. The question of alsike clover came up before the meeting, and was largely discussed with much interest. It was thought profitable for all farmers to grow it, who have deep soil. It was thought it should never be sown but with red clover and timothy—2 to 4 pounds per acre.

FEEDING BEES.

Thos. O. Hines feeds in combs; would not feed in bad weather.

H. Stewart has a back-entrance arrangement, so that the bees pass back into another hive, fitted up behind to hold the combs, and so robbers cannot get in.

CLIPPING QUEEN'S WINGS.

Byron Crevelin clips all his queens' wings; would not do without.

D. D. Hammond thinks the clipping of his queens indispensable; would clip both wings three-fifths of the tip of the wings.

Frank Coverdale clips the fan part of one wing; thinks that the queen is not so apt to go far away when swarming, as when she attempts to fly, the sound wing turns her head toward the parent hive. Thus, if you are not just on hand, the queen's chances are better not to get lost, but to return.

Henry Stewart says that the Alley self-hiver is a success.

The following resolution was adopted by the convention:

WHEREAS, The City of Maquoketa has seen fit to tender us the free use of their City Hall in which to hold our Bee-Keepers' Convention, we, the members of the aforesaid convention, do tender to the city our most sincere thanks, and to the citizens we do extend our hearty appreciation for their hospitality.

Signed by committee:

HENRY STEWART,
MANVILLE TARBOX,
T. W. LARGE.

The meeting was a busy one. Some of the essays had to be carried over till next session.

Invitations from Anamosa, Wheatland, De Witt, Davenport and Clinton were received, but after balloting the second time, De Witt was chosen as the place to hold the next meeting, and the convention adjourned.

The association now has a membership of 41 bee-keepers.

Members present represented 1,649 colonies, Spring count; Fall, 1,818.

Number of pounds of comb-honey, 14,435.

Extracted-honey, 5,200.

Total, 19,635.

Average yield per colony, 12 pounds.

Wax, 516 pounds.

ON EXHIBIT.

Henry Stewart, of Prophetstown, Ills., section-case and bee-escape.

D. D. Hammond, clipped queen.

H. S. Bowman, of Maquoketa, hive and section-case.

C. M. Dunbar, of Maquoketa, showed much interest in the meeting, and proposed to pay dues, although he did not keep bees, and by a unanimous vote, was elected an honorary member of the association.

Mr. Dunbar is Chairman of the Board of Trustees of the State Agricultural College, and extends to the bee-keepers of Eastern Iowa an invitation to correspond with the officers of that Department, and assured them that their wishes would be complied with.

Welton, Iowa.

Moth Millers and Foul-Brood.

AUGUSTINE LEECH.

The question has often been asked, "What is the cause of foul-brood?" When dead brood is found in the hive, if the apiarist will remove the brood-frame, and with a pair of pliers, pull the dead brood out of the cells, he will find the larvæ of the moth miller quite numerous, and they are the cause of the dead brood.

They will be from ¼ to ¾ of an inch long. They work in the base of the cells, and suck the food from the bee-larvæ, and they die.

On cool nights in May and June, the cluster draws in, leaving a space where the queen has deposited her eggs in the comb, and the moth miller enters the hive, and deposits its eggs in the same cells, and they hatch out together, and when the food is exhausted, the larva of the miller crawls up beside the bee-larva, and cuts the hole in the capping of the cell.

Now, if the dead brood is removed from the comb, the colony will improve, but it will be better to take a comb of hatching brood from another colony and put in place of the comb which contained the dead brood.

I live about the middle of Ontario, and for 55 years have not had anything to contend with except the moth miller pest.

We have a law in Ontario relating to foul-brood; but before that law was passed I argued with Mr. McEvoy on the question of foul-brood, and he said it was chilled brood—now, it is neglected brood.

North Glanford, Ont.

Painting Hives to Prevent Dampness.

B. E. RICE.

In the last issue of the Bee Journal is an article on painting hives on the inside, in order to keep dampness from penetrating the walls. This may seem all right to some, and especially those who have had no experience in the matter, but I have never found any difference in that respect, and I have used them both ways. Some years ago, I would not have thought of putting a swarm of bees into a hive that was not painted up in good shape, and especially on the outside, but of late years I have changed my mind, and do not paint them at all.

I consider it a loss of both time and money, and the only good it does is to protect the material they are made of, and, perhaps, make them last longer.

I believe that all painted hives are detrimental to bees, and especially so during the dry and hot seasons of the year, with the exception of one color—white. I have seen bees, during July and August, suffer terribly from the heat of the sun on painted hives, and they would crawl out and cluster on the shady side of the hive, while, on the other hand, a colony in an unpainted hive, keeps right on at work.

This plainly shows that the hive so painted retains the heat, and makes it too hot and sultry for them to remain on the inside, while the others are not so affected.

I have discarded all hives that were painted any dark colors, and especially red. I have, for the last three years, had better success in wintering bees in unpainted hives than those that were painted, and the colonies in the unpainted hives were among the first each year to cast swarms.

I would suggest to anyone that has not had any experience with painted and unpainted hives, to take 2 colonies as nearly equal as possible. One to have a good, painted hive (not white), and the other an unpainted one. Both of them are to be placed in the sun, with no protection whatever, during the months of July and August, and note the difference, and report the same through the Bee Journal.

In regard to damp walls in bee-hives, I do not see that there is any necessity of being bothered much in that way, if one takes pains in preparing his bees for Winter, and puts good mats over the tops of the frames, with a half-inch space between, so as to allow the bees to pass freely from one comb to another. The mats should be filled with some kind of porous material. Dry sawdust is good, and oat or buckwheat chaff, cotton batting, finely cut straw, excelsior, hair, and many other things would answer the purpose very well.

Then, with a well ventilated bee-house and cellar, there will be but very little danger of being troubled with dampness, as what accumulated in the hive would escape through the mat on the top of the frames.

But in case one should be troubled with dampness, and his ventilators would not remedy it, set in among the bee-hives three or four dishes that will hold about a peck of lime each; use unslacked lime. This will remedy the trouble in a great measure.

I should be glad, indeed, to have the opinions of other bee-keepers as to using so much paint, and if it is useless to use so much of it, we all want to know it.

Boscobel, Wis.

Apicultural School in Germany.

REV. S. ROESE.

A few months ago the Bee Journal gave the figures in full of the amount appropriated by the different States in Germany, in aid of apiculture, the Grand Duchy of Baden taking the lead in point of liberality.

And now another move has been made by this enterprising State to make apiculture one of the most important branches of industry, and arrangements have been completed to establish a free school in the city of Eberbach, Baden, where bee-culture will be taught to both young and old, to perfection in theory and practice. Tuition is to be free to all, and its courses are to be divided into three terms annually; one week's tuition to the elderly people, and two weeks for the younger people.

All applicants for admission must not be under 16 years of age, and of blameless character, and if not personally known to the Board of Trustees or officials, are required to present a certificate of character, signed by the Burgomaster of their respective city or town.

Each scholar is to provide his own board and lodging. At the close of each term diplomas will be awarded to the worthiest, who will also have their expenses—such as board and traveling outlay—returned, in part or in full. A Board of Directors, elected by the State Bee-Keepers' Society, with the Burgomaster of the city, will control the whole, and report annually the results to the Secretary of the Interior.

The various branches of tuition are as follows:

A.—1. The honey-bee. 2. The three species and their respective places in the hive. 3. The various races. 4. Diseases of bees. 5. The enemies of the bees.

B.—1. Plan of apiary. 2. Bee-hives. 3. Apiarian implements. 4. Literature.

C.—1. Management and care of bees in Spring. 2. Increase of colonies. 3. Care of new swarms. 4. Queen-rearing. 5. Preparation for Winter. 6. Successfull wintering.

D.—1. Bee-pasture. 2. Surplus honey. 3. The history of apiculture.

With the above regulations one should conclude that Virgil, in his poems, and Aristotle, in his practice, had a glimpse of the advanced state of apiculture in the nineteenth century.

Maiden Rock, Wis.

Texas Apicultural Notes.

A. C. ATEN.

My bees are very much mixed—Cyprian, Italian, Syrian and black bees, the Italian blood predominating. The largest yield I ever had from one hive (about 300 pounds), was from a colony supposed to be a mixture of the three races first mentioned.

I once had a colony of pure Cyprians, but they were very cross, and drove me away from the hive twice, after which I became more careful. In about two years the queen was superseded, and after that they gave me no trouble.

My bees, I think, will compare favorably with any I know of for the last eight years, averaging, each year, from 50 to 110 pounds per colony.

I have never owned an imported queen, but have had brood from imported queens, and also queen-cells from neighbors. I am pretty well satisfied that it is unnecessary, at present, to import queens, and think I have better bees than I can import.

I think, with friend Harmer (page 158), that we are as much entitled to a bounty of 2 cents per pound on honey, as the sugar men are on their product, as cheaper sugar will cause a reduction in the price of honey. This is rather a serious matter with honey producers, and a little bounty of 2 cents per pound would be quite a help to us.

We have no trouble, in this part of Texas, in selling granulated honey. No one ever doubts the purity of my honey, and I do not believe there is any adulterated honey sold here.

Some years ago, about the middle of February, I purchased 10 colonies of bees, which were about 15 miles distant. They were in the common box-hive (except one or two colonies, which were in patent hives,of no use to a practical beeman). I put plenty of straw in the bottom of my wagon-bed, and, with a small bit, bored a number of holes in each hive, then put them in the wagon, on the straw, which closed them up so that not a bee could escape. I started for home, but had not traveled over a mile when the top of one of the hives, being quite rotten, was knocked off, and the bees began to come out by the hundreds. I jumped from the wagon, pulled the pin out of the double-tree, and got the mules away in less time than I can tell it, and, although the bees attacked me and stung me terribly, I got the mules away without getting them stung but a few times. A bee sting does not hurt me much, but I procured some soda and water, with which I bathed my head, and soon was all right. I could do nothing with the bees that day, however, so waited until night, then closed the hive securely, and had no further trouble.

We have no trouble here wintering bees, unless we let them starve, and I find it much easier to see that my bees have plenty of stores in the Fall, than to be examining them in the Winter. See that they are all right in the Fall, and one need not trouble himself much about his bees again until Spring. I have never known any foul-brood in this part of Texas.

Fruit is just beginning to bloom, and bees are busy, and appear to be doing well. They have, however, been able to get pollen and, perhaps, a little honey for a month past, on warm days.

If any one having a good location for honey, will take an interest in bees, purchase a good manual on the subject of bees and honey, then study, read, and practice what he learns, he can succeed every time.

Round Rock, Tex., March 2, 1891.

Bees are Helpful to Fruit-Growers.

H. D. ALEXANDER.

I have a vineyard of three acres, and never knew a honey-bee to puncture grapes until some bird had pecked the berry first, or it had been cracked by wet weather, and I have watched them closely for years. They will alight on a cluster of grapes, after the honey flow is over, and if none of the berries have been punctured, or cracked, they will leave it, and try another cluster.

The bees never did any damage, but helped to clean out the cracked and punctured ones, for after their visits, the skins of such would dry up, and when the grapes were picked and assorted, they were dry and clean, whereas, had it not been for the bees, the cracked and punctured ones would have been wet and sticky, and must have smeared the sound berries and clusters. For these reasons I consider Miss Bee a helper, instead of a nuisance. I also have an orchard of apple, pear and plum trees, for them to work in, and I have never yet failed of getting a good supply of honey and fruit of the best quality.

I winter out-doors, in chaff hives, using kiln-dried sawdust and shavings for packing. Am well protected on the north and south, and am three miles from Lake Champlain.

My theory, in the care of bees, is to let nature take its course, and not disturb them more than can possibly be avoided, and I think they do better. The hardest month on bees, in this locality, is April.

I never fed bees until last Fall, when I gave those colonies that were short of stores, all the sugar syrup they would take.

Last Spring, I opened 15 colonies of of black bees, and found them solid with bees, and having plenty of stores. After having kept black bees for nine years, I concluded to try 10 colonies of Italians, which I placed by the side of my blacks, making 25 colonies in all.

The blacks cast 3 swarms, and the Italians 6 in June and July, and 2 in August. The latter swarms were the best and heaviest, and I fed them upon unfinished sections. The latter part of September they went into winter quarters in 12-frame Bristol hives, and at this date, after a sharp, cold Winter, I find them still strong in numbers, and with plenty of supplies.

From 23 colonies I took 1,100 pounds of saleable comb-honey, which sold at an average of 17 cents per pound. My black bees stored 2 pounds of comb-honey for every pound stored by the Italians, and capped it in nicer style. I find the Italians to be better breeders than the blacks, but the blacks are better honey gatherers.

The first honey I took, in the latter part of June, was amber-colored instead of white, and the capping was yellowish, which gave it the appearance, at the first glance, of being dark honey, but my customers did not exactly like it, and the color hurt its sale.

The honey flow began well, but in two weeks it ceased, and no more honey, white or dark, was gathered during the season.

Charlotte, Vt., Feb. 28, 1891.

Uncle Mose Stirs up the Bees.

M. DOBBINS.

I had purchased 3 colonies of bees, and placed them in the garden behind some rose bushes, to conceal them from the boys.

When the weeds began to get too thick in the garden, I employed Uncle Mose Brown, and old negro about 50 years of age, who would be perfectly bald, except for a little fringe of wool, reaching from one ear around the back of his head to the other ear.

Uncle Mose has a violent temper, and as he usually wears a hat without any crown, the boys annoy him by pelting him on the top of the head with small pieces of putty, blown from a tin tube, whenever opportunity offers.

He began hoeing the potatoes, and as the ends of the rows were close to the hives, I concealed myself behind the fance, to see if the bees would molest him.

When he was within about 40 feet of the hives, he suddenly dropped his hoe, and, clapping one hand on his bald head, exclaimed, "Hi, yi, dar, you li'le white rascals; jus' hol' on. Ouch! Lawd-a-massa! I kin stan' putty an' blue clay; but—gosh all hemlock, how many is dar ob you? W'en you gits to frowin' carpet tacks, an' shingle nails, an' grabble stones, I'se got to do sumpin."

Reaching down, he secured a handful of stones, and began to throw them into the rose bushes, exclaiming, "Git outen dat, you rascals!"

This so enraged the bees, that they ceased their labors, and turned their attention to Uncle Mose. The old fellow soon discovered his mistake, and jumped over the fence into the yard where we kept the goat. This aroused Billy's anger, and he resented the intrusion by butting Mose over the fence into the road.

"Golly, dat mus' a bin a drone," said Unce Mose, as he landed on all-fours; "hope de queen won't git er whack at me; if she do dar won't be any hope fur me in de nex' wurl, fur cussin' am wus dan stealin' mellins an' chickens. Guess I'll go home, an' let dem bees alone, fur dey is wus dan de boys; 'sides, I doan feel like hoein' in er gyarden, to-day."

Greenfield, Pa.

Foreign Method of Transferring.

ADRIAN GETAZ.

In answer to the inquiry regarding the best method of transferring bees, I offer the following, which has been known in France and Germany about 20 years, but not in America nor England:

Fill the new hive with frames full of foundation, and place it on the stand where you wish it, after having removed the old hive. Drum the bees out of the old hive into a box—at least enough of them to be sure that you have the queen. Put the bees and queen (either the old queen or a new one, if you want a change of queen) into the new hive. Put on the new hive a queen-excluder, and on top of the queen-excluder the old hive.

In 21 days the brood in the old hive will be hatched out, and the bees can then be drummed into the new hive, and the old hive and its combs disposed of as you like.

One difficulty is, that both hives may not be of the same size; the old hive is, we will say, smaller than the new one. In that case, get a board larger than the new hive, make a hole in it as large as possible, but smaller than the old hive; tack your queen-excluder on that hole, and put the board between your hives, then stop all the openings except the entrance of the new hive, and you will have it. This is better than the Heddon method, in that it keeps the bees together, practically, in one hive; while by the Heddon method you make (for the 21 days necessary to the hatching of the brood) two very weak colonies out of one, probably not very strong. In quite warm weather, and with plenty of honey coming in, the difference would not amount to much; but in time of scarcity or cold weather the whole colony might be lost when using the Heddon method, either by robbing or by inability of the bees to keep up warmth and work up, while by the above plan there would be no danger.

I would not advise cutting the combs of the old hive and fastening them in the new frames. It is too much work, too much honey spilled, too much brood killed by cutting the combs, or trying to straighten them when they are crooked. Besides, you will often start robbing during the proceedings, and have a "big time" with it; and, finally, your combs will not be as good as those built on foundation, no matter how careful you may be.

Knoxville, Tenn.

Greatest Value and Least Cost.

F. D. LACY.

The methods we adopt in the different vocations we follow, are apt to be the easier way to ourselves, although, perhaps, a hard way to others. It is easy to do as we are accustomed to doing, though handier methods might be devised.

It is not always prudent to throw aside the old plan to adopt the new, and the good qualities of the new should be well established before anyone should venture to make the change.

Mechanisms to facilitate labor, if simple, are easy to manipulate, and cheaper to buy, and usually prove most satisfactory. Beware of complicated machinery, as there are many pieces to handle, and much to get out of order, and when one piece is broken, the remainder is liable to become scattered and lost.

A good hive is as necessary to the bee-keeper as a good barn is to the farmer; for the bee may gather honey, and the soil may produce good crops, but unless the products can be properly secured, neither are made available.

A farmer may have a barn economically built, yet answering every purpose, while, in attempting to make one overly handy, he would go to needless expense, and have many things in the way that would seldom be required.

It is the same with bee-fixtures. The working capacity of the bee depends but little upon the character of the hive, and the hive that can be easily handled, and the proceeds made most available, is good enough.

It will not pay to be running after all kinds of hives that are advertised, for different men like different things; besides, in too many cases, there is some one who has an ax to grind.

The bee-business, in a good locality, may prove profitable some years; yet there are so many partial failures that it behooves every one to invest prudently and carefully in bee-fixtures, and it hardly justifies any person, in an ordinary location, to depend wholly upon such a business.

What is economy, is a question that different persons will answer in different ways. Therefore, it is well for each one to study the questions for himself, and determine what is best for him to do.

Nirvana, Mich.

Bee-Notes from California.

S. L. WATKINS.

We are having fine weather in this part of California, at present. Bees are at work, and rapidly breeding up. Manzanitas and alders are in bloom, and several species of wild flowers; and if the warm weather continues a few days, the mountain sides will be clothed with a waving sea of golden compositæ.

Beginners sometimes discover a colony that they suppose queenless, and introduce queens, only to have them killed, or place brood of the proper age in the hive, and find that the bees do not start queen-cells. Such colonies must contain a queen of some kind, usually a virgin that has defective wings, or defects of some kind, that have prevented her from being fertilized.

It is sometimes pretty difficult to find such queens, especially with black bees, but by using one of Alley's combined drone and queen-traps at the entrance, and shaking the bees in front of the hive, you generally succeed in catching her.

We have had very little rain this season, but still there is plenty of time for heavy storms. If we have plenty of late rains we generally entertain hopes of a good honey crop. At our elevation—4,000 feet above sea level—the dry seasons do not affect the honey bloom to such a great extent as in the lower counties.

One season, I remember, it was extra dry here, and it seemed very doubtful if we were going to obtain any honey at all. All early plants dried up, and turned to dust beneath the feet, as if baked in an oven. At the very driest time of the year the hartshorn, a slender, unobtrusive little plant, forced its way out of the parched ground, and made its appearance in patches miles in extent on the more exposed portions of the ridges, and the plant was clothed in a dense bloom.

The bees gathered plenty of honey to winter on, and furnished a little surplus besides. Another plant that delights in extra dry seasons is the *Hemizonia virgata*. Its home is in the valleys and foot-hills of California. It is quite a showy plant; the ray and disc flowers being yellow, and the stamens purple. It blooms until November, being the last link in the floral chain of honey plants in the foot-hills and valleys. Some seasons it has a showy multitude of bloom, but it will not equal hartshorn as a honey plant.

Last Fall, in the foot-hill portions of this county, I noticed a great deal of the so-called honey-dew on the yellow pines—some trees were just glistening with it. All bees within range of this kind of pine, gathered quite a Fall crop of honey; but it was of very poor quality, and fit for nothing but the bees to winter on.

Grizzly Flats, Calif.

WORK AND PLAY.

Three little busy bees,
  Toiling hand in hand,
"Buz-a-buz, work-a-work,"
  Sang the careful band.

Three little butterflies
  Chanted thus together—
"Never work, only play
  'Mid the sunbright heather."

Sang three little children—
  "Neither song is right:
Work and play, play and work,
  Make the earth so bright."

The Convention Hand-Book is received, and I am well pleased with it. Every bee-keeper should have a copy.

CHARLES WHITE.

Farmers' Valley, Nebr., Mar. 3, 1891.

CONVENTION DIRECTORY.

Time and place of meeting.

1891.
March 25, 26.—S. W. Wisconsin, at Lancaster, Wis.
Benjamin E. Rice, Sec., Boscobel, Wis.

April 1, 2.—Texas State, at Greenville, Texas.
J. N. Hunter, Sec.

April 9, 10.—Missouri State, at Boonville, Mo.
J. W. Rouse, Sec., Mexico, Mo.

May 6.—Bee-Keepers' Ass'n. and Fair, at Ionia, Mich.
Open to all. Harmon Smith, Sec., Ionia, Mich.

May 7.—Susquehanna County, at Montrose, Pa.
H. M. Seeley, Sec., Harford, Pa.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

North American Bee-Keepers' Association

PRESIDENT—P. H. Elwood....Starkville, N. Y.
SECRETARY—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

PRESIDENT—James Heddon ..Dowagiac, Mich.
SEC'Y AND MANAGER—T. G. Newman, Chicago.

Bee and Honey Gossip.

Poplar Tree a Honey Producer.

On page 294 is an inquiry by P. D. Ellingwood, in regard to the value of the poplar tree as a honey producer. If he will refer to pages 290 and 291 of Root's A B C of Bee-Culture, he will find a detailed description of the tree to which I think he has reference, under the name of tulip tree, whitewood or poplar. The name poplar is applied to other trees, beside the "tulip," in some sections of the country, which do not produce honey. But the tulip is certainly a great producer of honey, and of fine quality in this region.

Slippery Rock, Pa. T. C. KELLY.

Keeps Italian Bees Exclusively.

The Winter in this locality has been mild up to this time, and I hope the bees will winter without much loss. They have wintered well so far. I have 48 colonies of Italian bees, Fall count, which averaged about 20 pounds each of surplus honey, last season. I have always wintered bees on the summer stands (one-third of them in chaff hives). Bees were at work on Feb. 16 and 17, on the maples, but could not work Feb. 18, on account of rain and sleet nor have they worked since. I used to keep black bees, but lost them all in the Winter of 1884. I then had 45 colonies, in box-hives, and they had plenty of stores, but the cold weather did the work. Then, I purchased a colony of Italians, in a frame hive, for $10, and they have increased very rapidly, and now I keep Italians exclusively. I use the Simplicity hive, which I find easy to handle. The BEE JOURNAL is the best bee-periodical in America, and I find that I cannot do without it. It is an absolute necessity in the apiary, and all bee-keepers should subscribe for it. AREND NYHUISE.

Chandler, Ind., Feb. 20, 1891.

Bees were Smothered.

I have been examining and making inquiries regarding the prospects for white clover during February, and think it is generally alive. The ground has been covered with snow a good deal of the time since Jan. 1, and I think the clover has been benefited thereby. Another heavy fall of snow occurred yesterday, and it is now about a foot deep on the level. Weather clear, but very cold to-day, the mercury being 4° below zero this morning. Examined my bees on March 4, and think that out of 148 colonies, 4 are dead. The entrance to 3 of the hives were stopped up with bees, and I think those colonies were smothered. My bees are in the cellar.

W. C. NUTT.

Murphy, Iowa, March 9, 1891.

Claims the Championship.

I have taken the AMERICAN BEE JOURNAL for eleven year, and often see in it accounts of large yields of honey. I have kept bees for the past 25 years—for 12 to 15 years in Langstroth chaff hives—and for the last 7, have worked principally for extracted honey. I used 10 frames in the brood-chamber, but tried 7 in part of the hives for 2 or 3 years, and as they seemed to do the best in them, I now use 7 frames in all my hives. In the Spring I proceed as follows: As soon as all of the frames are well covered with bees, take out one or two frames of brood, put in their places frames filled with comb (keep plenty such on hand), put on queen-excluding board, then a second story, putting the frames of brood in that, and put in two or three frames of comb, filling the remainder of the space with full-sized dummies, and as soon as they need it, give them more frames of comb. Extract about July (frames are not filled sooner), and again in the Fall; this time, take all the honey out of the second story, and if they do not have enough honey in the brood-chamber to keep them through the Winter, feed granulated sugar. I do not average over one swarm from 3 colonies, and the yield of honey and the amount of sugar fed, for the past four years, is as follows, in pounds:

	Ext.	Comb.	Sugar.
June, 1887, to June, 1888 ..	425	25	200
June, 1888, to June, 1889 ..	410	..	125
June, 1889, to June, 1890 ..	450	40½	150
June, 1890, to date..........	525	25	225

I expect, next Spring, to feed at least 75 pounds more of sugar. My poorest season was from June, 1883, to June, 1884; the yield was about 10 pounds of comb-honey, and I had to feed 415 pounds of sugar to supply the bees with stores for the Winter. My bees are Italians, black and hybrids, average hybrids; at present two-thirds are pure Italians. I had 34 colonies last Spring (had only one swarm), but, last Fall, reduced to 27 colonies, and packed out-doors—have not examined them since. Think my average Spring count is about 25 colonies, and that my average yield, per colony (less sugar fed) has been about 10 pounds. If any one can give a poorer report, I would be pleased to hear from them, as I do not feel *very* anxious about keeping the championship. Have seen, or heard from, a dozen or more bee-keepers in this part of the State, and they all report that the season of 1890 was the poorest that has been known in Northeastern Pennsylvania for years.

P. P. CARTER.

Scranton, Pa., Feb. 25, 1891.

White Clover Prospects.

Since I began reading the BEE JOURNAL, I have had better success with my bees than ever before. My 10 colonies are in fair condition, but shall have to feed them. I have wintered on the summer stands, packed in clover chaff and leaves, the last two Winters, with very good results so far. Prospects for white clover are very good, at present.

LEE POWELSON.

Batavia, Iowa, March 6, 1891.

Recovering Swarms from Trees.

For the purpose of capturing swarms that may alight in tall trees, I have a long cane fishing rod, with a strong iron hook on the end, and a wire swarming-box, on a 20-foot pole. I climb the tree with the swarming-box, and hold it as near under the cluster as possible, while an assistant, by means of the hook on the fishing pole, catches the limb on which the bees are clustered, and, with two or three vigorous shakes, lands them in the swarming-box. Then I descend, and shake them into a hive. My swarming-box had a cover, but I considered it a nuisance, and removed it. The bees were apt to cluster around the rim, until it became impossible to close down the cover without crushing many of them, and, if I did not close it, the cover would fall while pouring the bees into the hive.

JOHN BURR.

Braceville, Ills.

Poor Honey Crop.

In this section, last season, the honey crop was not more than half as good as usual. Bees are in fine condition, the colonies being strong, with plenty of stores. The Fall flow of honey was of such short duration that the bees were not reduced by work. The Winter, so far, has been very moderate.

A. L. BEACH.

Pineville, N. C., Feb. 2, 1891.

Preparing Sections for Bending.

If Mr. E. C. Eaglesfield will throw an old wet bag across the crate of sections, a few days before he wishes to bend them, they will be all right. I put up 2,000 in that way last Summer, and did not break a good one. I use beeswax and rosin, kept hot, over an oil stove, to fasten the joints, and with a machine I can easily put up a hundred in an hour.

Wilcox, Pa. A. T. ALDRICH.

Bees in Good Condition.

In the Spring of 1890 I had 19 colonies of hybrids. I had wintered them on the summer stands, packed on three sides and top with oat chaff, the cap being filled with forest leaves. They began rearing brood very early, and by April 1, the weak colonies were entirely destitute of stores, and I fed them with granulated sugar, thus saving all but one colony, which swarmed out, and "took to the woods." By this time the fruit bloom had commenced, but the weather was cold and wet, which prevented the gathering of much honey, and stopped brood-rearing. Owing to dry weather, the white clover did not yield as much nectar as usual, and the basswood lasted but a few days, with a very light yield. I then took from the whole number of colonies, 400 pounds of comb-honey in one-pound sections, and 400 pounds of extracted-honey, of fine quality, all of which has been sold in the home market at from 15 to 20 cents per pound. The Fall flow of honey gave the bees plenty to do. Bees are wintering in good condition on the summer stands, with the exception of some late swarms, which are in the cellar.

JOHN W. BEATTY.

Excelsior Springs, Mo., Mar. 19,1891.

Very Little Surplus.

I am a "tenderfoot" in the bee business, but I have learned that bees will not live long without something to eat. I have learned, also, that every man who has queen-bees for sale has the best workers, and the gentlest bees in existence; but mine are not that kind. Most bee-keepers in this vicinity winter their bees on the summer stands. We had very little surplus honey last year, and I think some of the bee-keepers will not have a very large surplus of bees next Spring, for we have had very severe weather since ground-hog day. My bees are in the cellar, and are wintering first rate.

O. H. STEVENS.

Elk Point, S. D., March 10, 1891.

Trade-Mark Fallacy.

The question of a trade-mark for bee-keepers' use, as a means of protection, seems to me as bearing a long way in the wrong direction, because in bee-keeping, like all other occupations, frauds will be found who want to use the good name of some one, to cover up their own evil deeds. It is an utter impossibility for any one association of persons, as widely scattered as the bee-keepers of this country are, to have any mark or guarantee of purity, which can be used promiscuously by its members, without the employment of a competent and thoroughly honest inspector of the product, before this mark or guarantee can be placed upon the article for sale. Should such a mark be found upon an impure or inferior article, it would, of course, stamp any article bearing the same mark as of the same class, and I am not prepared yet to brand the whole bee-keeping fraternity as frauds. I have no doubt of the good intentions of the advocates of a trade-mark, and think that upon further consideration, they will be convinced it is a scheme which cannot be a success.

A. H. WADHAMS.

Torrington, Conn.

No Use for the Trade-Mark.

In regard to the trade-mark, the less said about that the better. I have a trade-mark which has served me well, and it grows more valuable each year. I put it on every section. It is as follows: "L. Eastwood, Waterville, O." I have a way of preparing sections for bending, that I like better than any other. Spread a paper on the cellar floor, place the sections on the paper, and in the morning they bend easily, and without breaking. I put them together as fast as I can handle them, using a toy mallet. I require no device for squaring them, as I can do that with my eye. After the grooves have been wet with hot water, they do not bend in proper shape so easily. My bees are very quiet in the cellar, with the temperature at 50° to 55°. I do not think there is any danger of keeping them too warm. Last Winter the mercury often went down to 50°, and they never wintered better.

L. EASTWOOD.

Waterville, O.

Home Market—No Trade-Mark.

I think Query 755, on page 313, is a very foolish one. What is the difference whether the queen stands on her feet, head or tail when you clip her wings, so you clip them? Since I have kept bees, I have never sold a pound of comb-honey for less than 15 cents, nor extracted for less than 12½ cents. I generally sell in the home market, and would not give a snap of my fingers for a trade-mark. Sell nothing but good honey, and then people will buy again. I have 18 colonies of bees. The prospect for white clover is good.

MATTHEW REBHOLZ.

Kane, Ky., March 6, 1891.

Apiarist's Paradise.

This country, along the coast for a distance of 60 or 70 miles, and also up the Coquille River for about the same distance, is a paradise for the apiarist, and for those who wish to engage in the cultivation of fruits of almost all varieties. Flowers are in bloom every month in the year, and the foot-hills are teeming with berries. This is truly the home of the busy bee, as "the woods are full of them," and it is not an uncommon thing to find cedar trees with from 100 to 200 pounds of honey in them. There are thousands of acres of Government land here, still open to entry.

Bandon, Oreg. E. G. GROVER.

Fair Prospects for White Clover.

I have 162 colonies of bees, which were placed in the cellar on Nov. 27, and all are doing well. The honey crop was a total failure last year, but we hope for a good crop the coming season, White clover prospects are only fair for this season, on account of the drouth last Summer. J. V. CALDWELL.

Cambridge, Ills., March 10, 1891.

* * *

Thinks a Trade-Mark Necessary.

I am in favor of a trade-mark for the Union, in the form of a stamp, and think the clover blossom would be an appropriate emblem. The name of the Union should be given, and also the name and address of the member using the trade-mark. Each member to have a number, which would be on his stamp, in addition to his name. Let a contract be made with some rubber stamp manufacturer, and the number affixed to each one, in figures, as the orders are sent in, and in this way counterfeiting would be prevented. The stamp would thus serve to advertise each member using it, and be profitable to him for that purpose, also. I have studied the trade-mark question a great deal, and cannot come to any other conclusion, and am convinced that a majority of the members are in favor of its adoption.

Pulaski, Iowa. E. L. KIRK.

* * *

Bees Dying of Starvation.

For the past two weeks the weather has been very severe, the mercury having been as low as 5° below zero, and this morning it had risen to zero. On March 7 snow fell to the depth of 6 inches. I have 60 colonies of bees in fair condition, but they will require to be fed for some time, before the honey flow commences. A great many bees have died of starvation in this vicinity, during the Winter. GEORGE W. COOK.

Spring Hill, Kans., March 9, 1891.

* * *

Plenty of Blossoms, but No Nectar.

From 52 colonies, Spring count, I received only 300 pounds of extracted-honey last season, after feeding 200 pounds of syrup. The Spring was cold and wet, and the bees did not breed up very fast until the latter part of June, but by July 1 they were in good condition for the honey harvest, and I began to pile on the surplus cases, as the clover was blooming profusely. However, no nectar was secreted by the clover in this locality, and, to my surprise, the supers contained very little honey. I have concluded that either my strain of bees are poor honey gatherers, or the queen-breeders exaggerate, in the reports of their varieties of bees. I purchased several queens during 1889, but their progeny did not gather as much honey as my hybrids. Many persons claim to make bee-keeping a specialty, but a great many of them have some other means of livelihood besides this industry, and in those cases the claim is not valid.

Hageman, Ind. FRANK STEVENS.

* * *

Good Honey Crop and Snow.

This morning it is still snowing, with just one foot of that beautiful covering on the ground. White clover and alsike were both in good condition previous to the storm, and I do not think they will be killed out. My best honey crops have been gathered in seasons following a snow in March.

FRANK COVERDALE.

Welton, Iowa, March 7, 1891.

* * *

Weak Colonies the Cause.

I noticed sometime ago a statement, by one of your correspondents, that last year's honey failure was caused by the colonies being too weak to gather a crop. Now, while that may be true in the writer's case, and in other isolated instances, it could hardly hold good over so much of this vast country. Another correspondent claims (page 346) that close spacing is the cause of failure of the honey crop lately. Like the former reason, it could hardly apply to such a large territory as this country, and certainly cannot be true. Here in my locality, the bees did well until the middle of June, when dry weather set in, with hot winds that dried up the nectar in the flowers, continuing all through the season. Large buckwheat fields yielded hardly any honey. Heavy dews here indicate plenty of honey, and *vice versa*. J. BLACKHALL.

Hobart, Ind.

* * *

Bee-Keeping for Profit, by Dr. G. L. Tinker, is a new 50-page pamphlet, which details fully the author's new system of bee-management in producing comb and extracted-honey. and the construction of the hive best adapted to it—his "Nonpareil." The book can be had at this office for 25c.

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◆

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◆

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* * *

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* * *

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W. H. KIMBALL.
Davenport, Iowa.

* * *

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W. J. PATTERSON.
Sullivan, Ills., Dec. 5, 1890.

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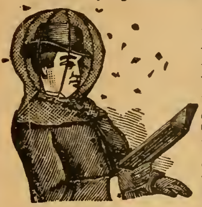

There are five cross-bars united by a rivet through their center at the top. These bars are buttoned to studs on the neck-band. The bars are of best light spring steel. The neck-band is of best hard spring brass. The cover is of white bobinet with black face-piece to see through.

It is very easily put together; no trouble to put on or take off; and folds compactly in a paper box 6x7 inches, by one inch deep. The protection against bees is perfect—the weight of the entire Veil being only five ounces.

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* * *

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* * *

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HONEY AND BEESWAX MARKET.

DETROIT, March 14.—Comb-honey is quoted at 14@15c; demand light. Extracted, 7@8c. Beeswax in fair demand, 27@28c.
M. H. HUNT, Bell Branch, Mich.

NEW YORK, March 14.—Market is bare of comb-honey. We quote: Extracted, buckwheat, 7@7½c; California, in good demand, at 6¾@7¼c, and market well supplied; Southern, none in market. Beeswax, 25@27c.
HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

KANSAS CITY, March 14.—Market continues about the same; stocks becoming light; no receipts. We quote: White 1-lb. comb, at 16@18c; dark, 12@14c; California white, 2-lb., 4@15c; extracted, 6@7c. Beeswax, 22@25c.
CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CINCINNATI, March 14.—Demand good for extracted-honey, at 6@8c; comb-honey in fair demand at 15@17c for choice, in a jobbing way. Beeswax is in good demand at 24@26c., for good to choice yellow.
C. F. MUTH & SON,
Corner Freeman & Central Aves.

CHICAGO, Mar. 14.—Demand at present not very active on comb honey. Fancy white, 17c; white, 16c; white, 2-lb. sections, 14c; buckwheat, 1-lb. sections, 12c; extracted, 7@8c. Beeswax, 28c.
S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, Mar. 14.—Fancy white 1-lb. comb, 18c; fair to good, 17c; dark 1-lb., 14@15c; 2-lb. white comb, 15@16c; 2-lb. dark, 13@14c; extracted, white, 7c; dark, 5@6c.
HAMBLIN & BEARSS, 514 Walnut St.

CHICAGO, Mar. 14.—The volume of trade in honey is very small. A few of the best lots are taken at 17@18c; but where the condition and appearance of honey is a little off, 16c is about the top. The supply is not large, but there seems to be about enough for the trade. Extracted, is selling at 7@8c, with fair trade. Beeswax, 27@28c.
R. A. BURNETT, 161 S. Water St.

BOSTON, Mar. 14.—Honey is in fair demand; supply short. Fancy, 1-lb. comb, 19@20c; fair to good, 18@19c; 2-lb. sections, 16@17c. Extracted, 8@9c. There is no beeswax on hand.
BLAKE & RIPLEY, 57 Chatham Street.

ALBANY, N. Y., March 14.—Honey market is slow, with small stocks of comb. We quote: White comb at 15@16c; mixed, 14@15c; dark, 12@13c. Extracted, light, slow at 7@8c; dark, firm at 6c. Beeswax, 26@30c.
H. R. WRIGHT, 326-328 Broadway.

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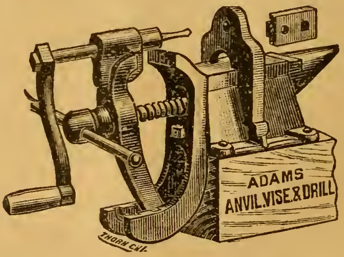

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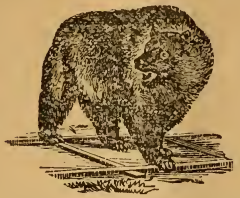

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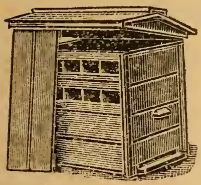

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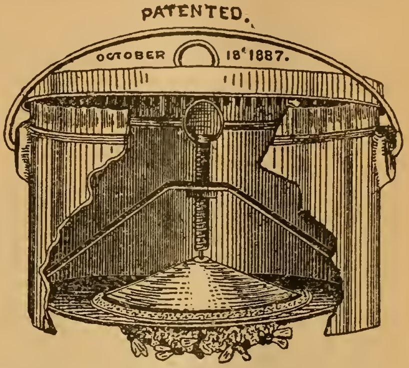

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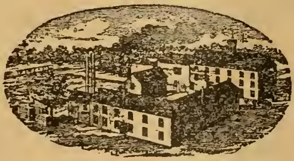

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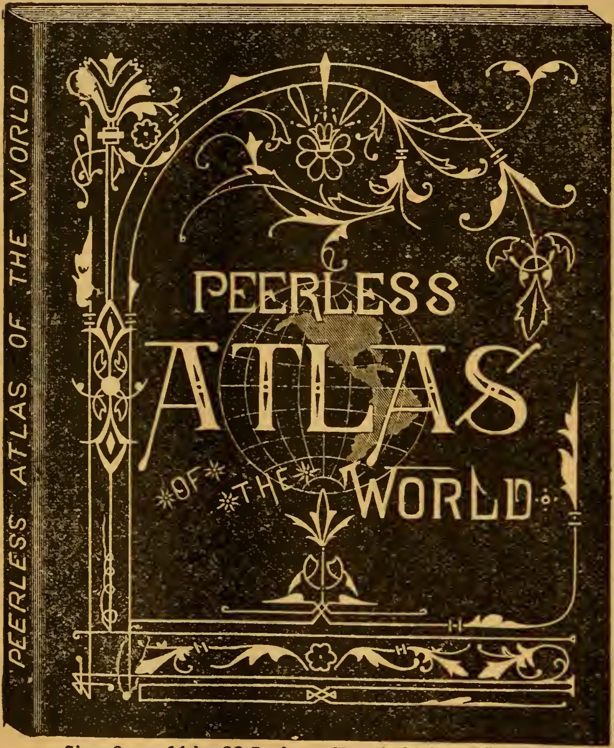

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CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVII. March 26, 1891. No. 13.

Editorial Buzzings.

This World is full of beauty,
Like other worlds above ;
And if man but did his duty,
It might be full of love.

Lord Brougham estimated that a bee can fly over 90 miles an hour, or 1½ miles in a minute.

The Honey Markets are bare, and if the honey crop of 1891 is a large one, there could not be a better prospect for a ready sale.

Startling and life-like pictures of the shooting of the Italian assassins in New Orleans, are printed in Frank Leslie's Illustrated Newspaper, of last week.

The Soiled Globe Bee-Veils are now all sold, and no more orders can be received for them. We have plenty of the perfect ones, and can fill orders by return mail.

So Far, reports show that the bees have generally wintered well—but the trying weather is yet to come, in all probability. The present indications are that this year will record a good crop of honey. We have had two years of failure in that line, and a third would be almost an impossibility—so far as all precedents are concerned. We hope for a "boomer !"

Beeswax is getting scarcer, and those having any on hand should send it to market at once. A large quantity will be needed for making comb foundation within the next few weeks. If all the beeswax now in the hands of the bee-keepers is sold at once, it may prevent a rise in the price of comb foundation.

"**Education** at the Michigan Agricultural College : its scope, its method, and its results; by President O. Clute." This is the title of a pamphlet of 14 pages, issued by the College. It is very interesting, and shows a healthy growth of the College during the 33 years of its existence.

A Sneak-Thief is often discovered by his sneaking actions—so you can easily recognize a robber bee by its quick motions and sneaking ways. In times of scarcity of honey, if tempted by exposed sweets, any bees may become robbers.

Remember the *sad* experience of last season ! Every one should order all the Supplies necessary for the Apiary *at once*, and avoid "the rush." The delays and annoyances of last year should teach a valuable lesson in this line.

The Scarcity of beeswax may soon cause an advance in the price of comb foundation, as it has done for several years, in early Spring. A hint to those who intend buying foundation, to do so *soon*, may save them some money.

Sex Determined by Nutrition.—In a weekly magazine entitled "Knowledge," published by John B. Alden, of Chicago, we find the following under the above heading, in the number for last week. As it is very interesting, we present it to our readers:

In a work on the *Evolution of Sex*, Prof. Patrick Geddes and J. Arthur Thompson bring together a great number of observations tending to prove that nutrition is "one of the most important factors in determining sex." They cite the observations of Yung (*Influence des Milieux Physiques sur les Etres Vivants*) on tadpoles.

Tadpoles, according to Yung, pass through an hermaphrodite stage, but under ordinary conditions they develop into males and females in the proportion of 57 females to 43 males on the average. In 3 cases of a number of tadpoles living under natural conditions, the proportions of females and males were 54 to 46, 61 to 39, and 56 to 44, respectively.

With 3 broods of tadpoles kept in conditions in varying degrees favorable to nutrition, Yung obtained these striking results: in the first brood, fed with beef, he raised the percentage to 78; in the second brood, fed with fish, the percentage rose to 81; and in the third, which was fed on the specially nutritious flesh of frogs, it rose to 92.

The development of the queen-bee—mother of a new generation—from a larva in all respects the same as the larva of the infertile worker, is a question of diet. The queen larva gets a quantity of fatty material double that given to larvæ destined to be workers.

The case is similar, yet different, with bumble-bees. Eimer (*Entstehung der Arten*) has observed that, among bumble-bees, the first brood, hatched in early Spring, get scant nourisement: they develop into small females, workers in a sense, yet fertile, though their progeny are drones only.

When the season is more advanced, a second brood is produced by the queen: these obtain more abundant food, and develop into larger females; but their progeny also are drones, with an occasional female. Finally, the future queens are born.

A similar lesson is taught by Von Siebold's observations of *Nematus ventricosus*, a species of wasp. In *N. ventricosus*, the fertilized ova, unlike those of the hive-bee, develop into males as well as females; while the parthenogenetic or unfertilized ova may produce females in a small percentage. From Spring onward, as warmth and food both increased, Von Siebold estimated the percentages of males and females in broods of larvæ reared from fertilized ova. The rising ratio of females is remarkable—viz., June 15 it was 14; July (early) 77, (late) 269; August (early) 340, (late) 500. The effect of lower temperature and reduced food-supply is seen in September, when the number of males is equal to that of females.

Our Readers are found in every State, Territory and Province in North America, as well as in Europe and Australia. Hence, we are not surprised to have friend Roese send us an item about his correspondents embracing the Continent, and saying they obtained his address from the AMERICAN BEE JOURNAL. Messrs. Thurber & Co., wholesale grocers, of New York, wrote us, sometime since, that they received an order from Africa, and the party sending it said that he got their address from our BEE JOURNAL. Friend Roese says:

It must have many readers, for from Maine to California I receive letters from German bee-keepers, and others, asking for sample copies of the Leipziger *Bienen-Zeitung*, stating they saw the advertisement in the AMERICAN BEE JOURNAL. But you do not boast of the number of your subscribers like some, but move on quietly, letting the oldest and ablest bee-periodical in America speak for itself. It does speak, too, and finds its way to every nook and corner; and many of its interesting articles find their way by translation to the Teutonic brotherhood across the waters.

STEPHEN ROESE.

Honey Remedy for Sore Throat.

The following recipe should be used as a gargle:

Amm. tinct. guaiac	4 drachms.
Comp. tinct. cinchonæ	4 "
Potass. chlor	2 "
Extracted honey	4 "
Powd. acaciæ	q. s.
Water	2½ ounces.

Also swallow a tea-spoonful each alternate hour.—*Medical Brief.*

The Many Friends of Mr. F. H. Macpherson, Associate Editor of the *Canadian Bee Journal*, will be pained to learn that the accident mentioned on page 343, is of a more serious nature than was at first supposed. The following from our Canadian contemporary, will explain the accident and its result so far:

> The last issue of the *Canadian Bee Journal* contained a short paragraph to the effect that Mr. Macpherson had met with an accident through slipping on the ice. At the time, we thought that the result of the injury was of a temporary nature only, but it has turned out that the fall was more serious than had been supposed.
>
> He was coming out of a house one evening about 7 o'clock; the ground was covered with a thin film of snow, which prevented him from noticing that there was a thin sheet of ice directly at the bottom of the steps. Consequently, the moment he stepped on the ice, both feet slipped from under him, and he fell, striking the back of his head on the edge of a board of the steps. He was taken home and the doctor called in, when it was found that he had sustained a very severe concussion of the brain. He was delirious all the first night, and the greater part of the next day. He has since been recovering so slowly that the doctor has ordered him away for a time, that he may secure rest for the brain.

The AMERICAN BEE JOURNAL sympathizes with friend Macpherson, and hopes that the needed rest for the brain, and complete restoration to health will result from the "enforced rest."

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The Sixth new bee-periodical has just made its appearance. It is a good-looking and healthy-appearing youngster. It contains 16 pages and a cover, and is published monthly, at 50 cents a year, at Unionville, Mo. Its name is the *Missouri Bee-Keeper*, edited by E. F. Quigley.

◆

Dewey's "Peet" Queen-Cage is sent to our Museum. It is a shipping and introducing cage, and is made after the Peet pattern. Full printed instructions accompany each cage. It comes from Westfield, Mass.

Father Langstroth writes us the following letter, which conveys the sad intelligence of the death of his son-in-law. It came after the forms of this JOURNAL were all ready for the press, but we open them to give the latest news from our aged but faithful friend, even though it is sad news. The BEE JOURNAL offers its condolence. Here is the letter:

> DAYTON, O., March 22, 1891.
>
> My son-in-law, Hugh C. Cowan, left us this Sabbath morning for the better world. His health gave way more than a year ago, and for the last few months he has been confined to the house. His disease was consumption.
>
> He died in the blessed expectation that when absent from the body, he would be present with the Lord.
>
> Yours affectionately,
> L. L. LANGSTROTH.

◆

"Bee-Keeping for Women," is the title of two articles in the *Ladies Home Journal* for April. The first is "from a woman's standpoint," and is written by Julia Allyn; the second is "from a man's standpoint," and is from the prolific pen of Dr. C. C. Miller. Such articles in a periodical for the home and family, do considerable good, by informing the general public about bees and honey.

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Catalogues and Price-Lists for 1891 have been received from

Dr. G. L. Tinker, New Philadelphia, O.—30 pages—Hives, Queens, and Bee Keepers' Supplies.

W. Hood, Spring Green, Wis.—4 pages—Bee-Keepers' Supplies.

C. F. Muth & Son, Cincinnati, O.—32 pages—Honey and Bee-Keepers' Supplies.

F. H. and E. H. Dewey, Westfield, Mass.—16 pages—Italian Queens and Cages.

J. M. Young, Plattsmouth, Nebr.—4 pages—Italian Bees.

W. C. Frazier, Atlantic, Iowa—1 page—Italian Bees.

Fred Rossow, Dundee, Ills.—1 page—Bee-Hive Supplies.

J. P. Moore, Morgan, Ky.—4 pages—Italian Bees.

Gillett & Horsford, Southwick, Mass.—36 pages—Nursery Stock.

RING, HAPPY BELLS.

Ring, happy bells of Easter time !
The world is glad to hear your chime ;
Across wide fields of melting snow
The winds of Summer softly blow,
And birds and streams repeat the chime
Of Easter time.

Ring, happy bells of Easter time !
The world takes up your chant sublime :
"The Lord is risen ?" The night of fear
Has passed away, and heaven draws near ;
We breathe the air of that blest clime,
At Easter time.

Ring, happy bells of Easter time !
Our happy hearts give back your chime !
The Lord is risen ! We die no more !
He opens wide the heavenly door ;
He meets us, while to Him we climb,
At Easter time.

—Lucy Larcom.

Queries and Replies.

Extracted-Honey and Beeswax.

Query 758.—In producing extracted-honey with old combs, do not the bees secrete more wax than they can use with profit? In other words, is not some of the wax wasted ?—New Jersey.

I think not.—G. L. Tinker.

I do not believe it.—Eugene Secor.

I do not think that they do.—J. P. H. Brown.

Perhaps—to a limited extent.—Mrs. L. Harrison.

I have seen no evidence that they do. —R. L. Taylor.

I have never observed that wax was secreted beyond the wants of the colony. —M. Mahin.

I am not troubled in that way, and have no wax wasted in using old combs. —H. D. Cutting.

This is a mooted question. I will venture this answer: None of consequence. —J. M. Hambaugh.

Possibly ; but the gain in honey will be so much greater, that it is better to use them.—J. E. Pond.

I do not think so. I believe this waste of wax imaginary. Bees secrete wax when they need it.—A. J. Cook.

That question is in dispute, and just at present the "Nos" seem to have the best end of the discussion.—James Heddon.

We think that there is no waste. Sometimes our bees produce more than a pound of wax per hive to cap the honey to be extracted.—Dadant & Son.

My bees do not secrete wax unless they need it. The idea that bees have to make wax, whether they want to or not, is a humbug, I believe.—A. B. Mason.

I do not know. Some say they do, but I doubt if much is wasted in that way. If it is, I think you will find the scales lying at the entrance.—C. C. Miller.

I think so, and for this reason I allow the bees to build some comb, enough to keep the number good, at least; for some of our combs are apt to get injured and become poor each year.—G. M. Doolittle.

I think not. The bees seem to have the power to produce wax only when actually needed. If this was not so, why do bees not continue to build comb during warm weather after the honey flow is over.—C. H. Dibbern.

I have reasons to believe that bees secrete wax involuntarily when gathering honey, but in my opinion the loss on that account is a mere imaginary deduction. The proof of the pudding is said to be in the eating. If you will give one colony of bees a good set of drawn-combs, to be filled for the extractor, and give just as good a colony a set of empty frames with starters only, for the same purpose, at the beginning of the honey flow, if you do not find out which side of your bread the butter is on—and the honey, too—your case will differ widely from all my past experience.—G. W. Demaree.

As bees only produce wax when needed, the chance for waste is infinitesimally small.—The Editor.

It Pays to Use Comb Foundation.

Always use comb foundation ; it is a great saving to the bees, and insures perfectly straight combs. Many persons claim it to be too expensive. Let us see: It is estimated that it takes 12 pounds of honey to make one pound of comb ; honey is worth at least 10 cents per pound in liquid form, which makes each pound of comb cost $1.20, besides the work of the bees in making. A pound of surplus foundation costs about 60 cents, or one-half saved.—*O. J. Farmer.*

Wavelets of News.

Late Rains in California.

The steady downpour of rain will make some of our Valley apiarists want to "flee as birds to the mountains," to escape the flood. As the late rains are usually credited with producing the greatest yield of nectar, the bee-men can look out upon the storm with the assurance of a good season. Few, if any hives are short of supplies. All that will be wanted this Spring is an abundance of primed sections, with a few last-season sections, filled with comb, to act as starters.

These rainy days are the golden days for the apiarist; in them he nails up and paints his hives, primes his sections, and prepares for the coming harvest of honey, which at this time promises to be an unusual yield.—E. H. SCHAEFFLE, in the *Rural Press.*

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Home Market in Colorado.

Montrose will record as large an increase in honey product as any other section of the State. There should be an excellent home market for all that can be produced. The opening of the Rio Grande Southern railroad, and the wonderful growth of the mining camps in the West and Southwest, will cause an increased demand at top prices.—*Colorado Field and Farm.*

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Bees in Winter Quarters.

It is best to avoid as much as possible disturbing bees in their winter quarters, until the time they shall show unmistakable signs of activity in the Spring. Usually this will occur in April. This is the ideal condition of wintering, but not always the real. Bees often become restless during the mild weather of Winter. A variable temperature, impure air, and jarring the hives all create restlessness. Bees should be kept in the cellar where the light is excluded. —*Exchange.*

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Facts About Bees.

Do not be alarmed to see a good many dead bees on the bottom-board. They keep dying off all the time from old age. Neither need it frighten you to see a little water running out of the hive when it is warm enough. The breath of the bees makes it.

Clear out the entrance if it gets clogged with ice or dead bees. But porous snow will do no harm, even if it covers the hive entirely.

Look out for colonies that are short of stores. It is poor policy to let a colony worry through the Winter, and then starve, when 25 cents' worth of feed would have brought them through all right. It will do no harm to feed, even if they do not need it. They will not waste it. Remember, a little too much is just right.—DR. C. C. MILLER, in the *Stockman and Farmer.*

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Fruit Trees and the Bees.

Apart from the profit undoubtedly to be derived from the honey, bees render a service, very often either not known or not thought of, by fertilizing the flowers of our fruits and seed plants; white clover, sainfoin and other forage crops, and most plants valued for seeds, and all our hardy fruits, owe their fertilization to the agency of insects, principally to the bees. How often one hears the complaint during a cold Spring, that the frost has killed the fruit blossom, whereas it is far more often that the cold prevents bees from flying far from their hives, and thus the flowers expand their petals, and no insect comes to execute the necessary task, so they fade away without yielding the fruit or seeds.

This wonderful provision, whereby the bee, while seeking its own food, performs an act upon which, for us, so much depends, should surely make us thoughtful. The apple blossom, for instance, requires five distinct visits for fertilization before a perfect fruit is formed; and, if but one is missing, the small, hard, imperfect fruit soon falls, if, indeed, it ever grows at all.

Each strawberry requires between 200 and 300 visits for fertilizing each tiny part of the yellow center of the flower. This being done, the fruit swells, and the little seeds outside the strawberry show how truly the bees have performed their wonderful work.

A remarkable instance of this work of bees came under my notice a few years ago. The Spring was cold, and the crops of gooseberries and currants very scarce indeed. In a garden belonging to a workingman, was a small shed for three or four hives, and close to it was a gooseberry bush. It was unusually cold, bad weather during the whole time the gooseberries were in flower, and th frost was accused of cutting the blossom, which nearly all fell off, the trees hardly setting any fruit. The small bush, mentioned, however, was an exception; it was loaded with fruit, the branches quite bending under the weight; while in a well-kept garden not many yards distant, with well-grown trees, there was hardly any fruit at all.

Bees may often be seen on flowers close to their hives in cold weather, but none on those at a distance. Bees are anxious to fly whenever possible, but a wonderful instinct warns them not to venture if the temperature is low.

The crops of hardy fruit in my own garden have lately been much larger than formerly, and I am convinced that the change is to a great degree owing to the fact that there are now plenty of bees close at hand to work whenever they are able. Thus, in every way I can but consider bee-keeping a source of pleasure and profit.—MISS M. GAYTON, in the *British Bee Journal.*

First Honey of 1891.

Bees have been gathering pollen for several weeks. During the last three or four weeks they have been bringing in immense loads, chiefly from the acacia, and the cells are now loaded with new honey, or rather nectar, for none of it is yet sealed. Brood-rearing is going on at a rapid rate. Since the rain came, the prospects of a good season are more encouraging.—WM. STYAN, in the *California Rural Press.*

Bees and Honey and Farmers.

There is a fascination in the keeping of bees, and in eating the honey there is pleasure. Having a strong liking for honey, the possession of a swarm of bees was one of the things particularly desired by myself, when a boy, but for several reasons the desire was not realized until after I came to manhood.

I see no reason why the farmer may not as properly keep bees to furnish his table with honey, as a cow to provide milk and butter. It is the wholesomest of sweets, and, on a majority of tables, a luxury not of every day use. The boys of the farm might assume the care of the bees, with enjoyment, if once they get interested in the science. An interesting way to get started with bees is to find a swarm in the woods, and transfer it to a hive; but on no condition put them, or any other bees, into an old-fashioned box-hive. Use a movable frame hive with section-boxes. If any-one wishes, I will give directions for transferring.

Some text book on bee-keeping ought to be procured, and a periodical publication will be found of great value. Soon after beginning with bees I procured a copy of "Bees and Honey," a neat book published by Thomas G. Newman, editor of the AMERICAN BEE JOURNAL, of Chicago. From its pages I learned considerable, and became more fascinated with bees than before. It is a book that can be highly recommended.—F. H. DOW, in the *Patriot*, Concord, N. H.

Those who Never study nature,
Never see a landscape fair,
Never note the wave of beauty,
Never feel the balmy air;
These, I say, miss half the pleasure
Of this life, and in a measure
Lead a life of stupid care.

Spring Protection for Bees.

In Canada and the Northern and Central states, the Spring packing of bees is one of the essentials to successful bee-culture. Yet perhaps not one-tenth of the bee-keepers in those regions practice it. Not only do ordinary bee-keepers, but many extraordinary ones as well, neglect to give Spring packing.

This is not only against the person's own pecuniary interests, but amounts to a moral culpability as indirectly affecting others.

One of the results of non-protection in the Spring is chilled and dead brood, liable to end in foul-brood. Other serious results are Spring dwindling, and the robbing of weak colonies thus neglected.

There is no doubt that a large proportion of the bees lost in the Spring, could be saved by proper packing and protection. The breeding temperature must be kept up, and this is impossible for a weak colony, or even a fairly-strong one, when the cold and raw Spring winds are penetrating the exposed habitation, and carrying off the heat as fast as generated. —ALLEN PRINGLE, in *Farm and Home.*

The Better Way.

Do not go to law with that neighbor of yours. Some afternoon meet him, in company with one or two mutual friends and neighbors, talk over your misunderstanding—"make up" and go home happy. This beats a lawsuit out of sight.—*Farm, Stock and Home.*

Topics of Interest.

Pollen-Producing Flowers.

G. M. DOOLITTLE.

We read a great deal in our bee-periodicals and elsewhere about the flowers that yield honey, but it is a rare thing to find much about our pollen-producing flowers. Why this is, I do not know, for surely the flowers which produce pollen have an important bearing on our pursuit. Of course, we cannot derive cash directly from pollen, as we can from honey, but without pollen of some kind we could have no bees to gather honey.

Thinking about the matter a few days ago, I concluded that a short article on the sources of pollen, and how the source from which it was obtained could be determined by the color of the pellets brought in by the bees, might not be amiss. The pollen which comes the earliest in the Spring has the most attraction for us, for two reasons: First, at that time we are anxious to see what our pets are doing, after their long Winter's sleep, which Spring has broken, bringing life and activity to us as well as the bees; and, second, this early pollen is that upon which our hopes depend for the bees to gather our future crop of honey—if we have any.

If we are not in a favored locality for early pollen, I think it would pay to set out some trees of the early bearing kinds, such as the pussy willow, and both the red and swamp elms, which not only yield early pollen in abundance, but are very nice as ornamental shrubs and trees. No pollen bearer, in this locality, is of more value, or of greater beauty, than the swamp elm, and while its natural home is the swamp or low grounds, yet it thrives well on high and dry ground. Later on, there are so many trees and plants which yield pollen plentifully, that there will, without doubt, be a fair supply, even in the least-favored localities. If not, fruit trees should be planted, first for the fruit, and second, early supply of pollen. Next, orchard grass should be sown for hay, which yields pollen the earliest and most abundantly of all the grasses in this locality; while, later on, the mammoth red clover and corn tassels will give an abundant supply.

If there are no very early pollen bearers, I think it is advisable to feed the bees some kind of ground grain as a substitute. Of all the grains, I prefer corn. Grind it very fine, place in a large shallow box in the sunshine, having it set on an inclined plane, when the bees will take out the fine particles by rolling the whole over and over to the lower side of the box. When the meal is worked down to the lower side of the box, reverse it, and see how nicely the bees will work it all down again. By thus working it over twice, they will get all the fine meal out of it, when the remainder can be fed to stock, so that there is no waste. Some think this does not pay, but it will pay in more ways than one, for the fun you and your friends will have seeing the little fellows roll in the meal, will pay you for all your trouble.

But how about the colors of the different pollens? Do they all bear the same colors as the flowers from which they are gathered? No, not all; for all know that the colors of the different clovers are, a deep pink for the two reds; light pink to nearly white for the alsike, and white for the white clover; yet all of the clovers give pollen of the same color, which is of a greenish-brown hue. I have examined very closely on this point, for some have withstood this, giving different colors to the pollens from the different clovers, and also describing the pollen as green, gray, etc.

Now, how to tell the source from which the different colored pollens come, as we see them going into the hive: I know of but one way to do this, which is, by watching the bee as it loads up on the flower, which thing I have done many, many times. In this locality we have first, skunk cabbage, blooming from March 20 to April 20; color of flower and pollen, yellow; although the sheath which surrounds the flower is purple. Next in order, is the coltsfoot, with yellow pollen and flower, and the poplar which blooms soon after. The flower of this latter is of a brownish-white, but the color of the pollen is black, or the nearest to black of any pollen we have. Then comes the pussy willow, soft maple, and red and swamp elm. The colors of the pollen from these are, bright yellow, light pink, and very light green, respectively, although the pollen from the red elm borders on the yellow shade.

The pussy willow and soft maple bloom two or three days earlier than the elms, and about four days after the poplar. Next in order comes the hard maple, with about ten days intervening between that and the elm, the color of the pollen being the same as the blossom, yellow. About May 20 to 25 the fruit trees bloom, together with the dandelion. The color of the former flowers varies; but, so far as I have observed, the pollen from all is a dingy white. That of the dandelion, is of an orange yellow, the same as the flower, which flower seems to have a great attraction for the bees, for they often leave the fruit bloom to revel in the thousands of spikes that it sends up to the light. Next comes the sorrel and orchard grass, both of which give a light yellow pollen; the orchard grass flower is of a yellowish-green, while that of the sorrel is pink. Following these come the clovers, which I have described above. After these the corn tassel, which gives plenty of pollen of a light yellow color; and a little later, the buckwheat gives an abundant supply of a whitish-gray color. This is the last pollen obtained of any amount, although we get a little from wild mustard, and, very late, from witch hazel. I should be pleased to hear of the different pollen resources of other localities, and presume it might be interesting to others.

Borodino, N. Y.

Items of Interest from Europe.

REV. S. ROESE.

I have translated from the *Bienenvater aus Boehmen*, the following items of interest:

The Governments in Germany extending aid to apiculture, and the amount, are enumerated below:

The Maerbische Central Verein, the sum of 1,200 marks; Rhinish Westphaelische Verein, 900 marks; Mecklenburger Central Verein, 1,000 marks; Hauptverein, of Danzig, 1,200 marks. The official report of Baden, shows an appropriation made by that Government, for 1890, of 3,300 marks, and that for 1891 is 5,700 marks.

In the vicinity of Jesi, in the Province of Ancona, Italy, a dreadful brood pest is raging, which the remedies of Cheshire and Carl Schroeder, for foul-brood, have failed to check. Importers of Italian queens should be very careful.

The *Buletin Apicole*, of Belgium, is teaching its readers a new and remarkable way of transferring bees, as follows: Place the empty hive on top of the hive containing the colony to be transferred, close the entrance hermetically, after which the hive containing the bees is placed in a barrel of water, and slowly lowered, the result being that the bees will quickly desert the old hive for the new one.

The oldest bee-keeper in the world lives, at present, in Russia. He is 98 years of age, and attends to the bees in the Monastery of Palshajeff, Bolhgrien. His mother died last Spring, at the advanced age of 125 years.

At Insterburg, Germany, a man tied his horse within ten paces of an apiary. A bee stung the horse, and the animal began stamping upon the ground, which so enraged the remainder of the bees that they soon covered the animal, and stung him so that he died from the effects of the stings that night. The bee-keeper paid one-half the value of the horse.

Maiden Rock, Wis.

Erie County, New York, Convention.

ROBERT MEATYARD, SEC.

The first meeting in 1891 of the Erie County Bee-Keepers' Association, was held in Andrews' Hall, Sardinia, March 14.

The convention was called to order at 10:30 a.m., with President O'Dell in the chair. Minutes of the last meeting were read and approved.

The Treasurer reported $17.00 in his hands. It was moved and seconded that the report be accepted.

Adjourned until 1:30 p.m.

AFTERNOON SESSION.

The convention was called to order at 2 p.m., with the President in the chair.

The opportunity was then given for the reception of members. Three new members responded.

The question-box was then opened, and the following questions propounded:

"Should the entrance to a hive be left open full width, or partly closed in Winter?"

S. S. Sleeper—Leave the entrance open full width.

Mr. Graves—Leave them open if you have no upper ventilation; but if you have upper ventilation, partially close them.

"When should bees be taken from the cellar?"

S. S. Sleeper—Would not take them out until they could gather honey.

Mr. Graves would take them out earlier in case they became diseased.

"Why is it we are apt to raise poor queens?"

Elmer O'Dell—Some queens, reared under unfavorable circumstances, turned out to be good ones, while others, reared under favorable circumstances, turned out to be poor ones; could not tell why.

S. S. Sleeper—If we could be sure of rearing good queens, bee-keeping would be more successful than it now is. I would destroy all small queen-cells.

"When and why should hives be contracted?"

The Secretary practices contraction at swarming-time, to force the bees into the super.

Mr. Pitcher would take out two frames and fill the space with a block, for the purpose of forcing the bees into the super.

President O'Dell would contract light colonies in the Spring for the purpose of retaining heat, and at swarming-time, to force the bees into the super.

"In what respect are the black bees superior to the Italians; also, in what respects are the Italians superior to the blacks?"

Addison O'Dell—As comb-builders the blacks are superior to the Italians, and fill the sections out nicer. The Italians gather more honey, are gentler to handle, better protectors of their hive, the queen can be more readily found on the comb, and are much more beautiful.

"Will each person present give his method of management of old colonies, after they have cast a swarm, to prevent after-swarms, etc.?"

Mr. Graves—The next day after casting a swarm, I break out all but one queen-cell.

S. S. Sleeper—After they cast the second swarm, I get them into the hiving-box, then go through the hive, break out all the queen-cells, and return the swarm.

Mr. Pitcher—I take the old queen away, return the bees, and on the seventh day destroy all but one queen-cell.

Addison O'Dell—We have good results from hiving the prime swarm on the old stand, and giving the old colony a young queen.

S. S. Sleeper then read an essay on the wintering of bees out-of-doors and in the cellar, which very ably covered all important points of both.

"What is the best method of hiving swarms when working for comb-honey?"

Mr. Pitcher—I return them to the old hive, and if the sections are partly filled with honey, I raise the super and put an empty super under it.

Elmer O'Dell—Our method is to put one frame of empty comb, and 3 frames containing starters, into one side of the hive with division-board, and cover the space behind the division-board with strips of thin boards, then place a super of sections containing foundation, on the hive. The empty comb in the brood-chamber keeps the queen from the super, and the small space crowds the bees into the sections, where they store the honey. In 10 days put two more frames in the brood-chamber, and in five days more put in two additional frames.

S. S. Sleeper agreed with the last speaker.

"From which cell are we apt to get the best queen; a corrugated or a smooth one?"

S. S. Sleeper thought the smooth one produced the best queen.

Elmer O'Dell thought there was no difference.

"In what order should bees wintered in the cellar be taken out; also, at what time of day?"

Mr. Graves would carry them out in the evening, and place them on the same stands they occupied the previous season.

The President thought that in a large apiary, it would be best to take them out in the evening, so they would not come out with such a rush, and get confused and come back to the wrong hive. After being out all night, they would mark their location and be more apt to return to the same hive.

On motion of Addison O'Dell, the meeting adjourned to meet at Sardinia, June 2, at 10 a.m.

Protection, N. Y.

Mother Bee; A Simile.

EUGENE SECOR.

Every experienced bee-keeper has, no doubt, observed the solicitude of the worker bees for the queen. How careful they are to protect her, and to preserve her life. What extravagant provision they make for a successor when she is to leave to become the mother of a separate colony, or if, by any mishap, she is lost or killed.

They use every means in their power to protect her from the effects of changes in the weather, and offer her the last drop of honey in the hive in case of probable or actual starvation. They seem to realize the fact that she is the most important factor in the future prosperity of the colony. If, from any cause, she is suddenly removed, note the distraction, the worry, the almost human grief shown in vain endeavors to find her.

As is the queen bee to the completeness

and usefulness of the colony, so is the mother in a human family to the happiness and prosperity of the home in which she is the queenly center. So long as *she* lives, there clusters about the old homestead a charm which no boy or girl can ever forget, and though they may roam in distant fields, in search of the sweets of fortune, they will return so long as mother is the reigning queen at the old birthplace, made sacred by a thousand memories of her unselfish devotion.

If she sicken and die, how soon is the home cluster broken and the hearth desolate! Like the motherless bees, that wander up and down the hive—homeless, hopeless, disorganized; a prey to marauders—so the family, that has felt the hallowed influences of a mother's prayers and love, is made to mourn and lament by her untimely taking off.

May the queens in *our* homes long be spared to honor the high places which they so nobly fill. May they never be superseded by fickle purpose, nor relentless fortune. May they never lack loyal devotion and protection, so long as a nucleus of the old stock is left to defend them.

Forest City, Iowa.

Bee-Notes from California.

S. L. WATKINS.

The one-pound section is being universally adopted in California.

The silver firs of the upper Sierras, are rich in both pollen and honey-dew.

Several species of wild buckwheat grow luxuriantly along the margins of streams, and furnish considerable honey some seasons.

The bee-business is improving in California; the live and let live prices that honey has been selling for during the last two seasons, is quite encouraging.

The famous white sage and alfalfa, undoubtedly stand at the head of all honey-producing plants in the West, both yielding large quantities of clear, pale honey, which is greatly prized in all markets it has ever yet reached.

Carniolan bees give splendid results in California, their hives being filled to repletion with honey, and overflowing with bees. They are admirably adapted to the Sierra Nevada Mountains, and excel all other races in honey-gathering, prolificness of queens, wintering, etc.

The fruit industry in California is now simply immense, and is growing greater every day. The last few weeks thousands of acres have been set to orange, lemon, fig, olive, apricot, grape, apple, pear, peach, etc., and still there are hundreds of thousands of acres of good land yet to be obtained, and turned into fruit-ranches, bee-ranches, etc,

There is a great deal of desert land in the Southern and Eastern parts of California, but very little of it is regarded as a desert in the eyes of a bee. Owen's Valley, Death Valley and the Mojave Desert, are said to be excellent honey-producing sections. Alfalfa grows well in these deserts, if irrigated. The Pacific Borax Co. has a ranch in Death Valley which they have set to alfalfa. The water is conducted from Furnace Creek, 7 miles away, to their ranch. They have about 100 acres set to alfalfa, and last season raised 8 crops, all good ones, too; so you see, if water sufficient for irrigating purposes could be obtained, it would be a great section for raising alfalfa.

Last fall I visited a bee-keeper in Yolo County, this State, who has several bee-ranches scattered around in the marshes of that section. He has all his hives resting on platforms, all the way from 8 to 12 feet from the ground, to keep them from being washed away by the high waters in the Winter time. All his hives are the Harbison style. Now, after the bees had filled their hives, he did not take off the sections at the proper time, and as a consequence, the bees did not have any place to work in the hives, so they came out and commenced working underneath their hives, on the platform, until some of them had combs suspended there, from 15 to 20 inches long. There are 50 hives on a platform, side by side, and when these bees commenced working underneath their hives, the bees of one colony must have surely intermixed with those of another, and the owner tells me that there was no fighting going on at all that he noticed.

Grizzly Flats, Calif.

That "Trade-Mark" for Honey.

DR. C. C. MILLER.

When the matter of a trade-mark for bee-keepers was first broached, there seemed to be no opposition to it, and the gradual growth of opposition has been something unusual. I have been watching, with some degree of interest, to see what arguments would be advanced for and against it. As nearly as I understand it, the object of the trade-mark is to protect against adulteration. Comb-honey is not adulterated, so the matter of a trade-mark does not directly concern myself, or other comb-honey raisers. Let us see how it will affect extracted-honey.

John Smith produces a good article of extracted-honey, but he finds that where-ever he puts his honey on the market, there is more or less a fear of adulteration in the minds of those who should be the consumers of his product. The people know (and bee-keepers do not deny it), that honey is adulterated. They would buy if they were sure of its purity, but they are afraid John's honey is some of the adulterated stuff.

To be sure, to a limited extent, John has built up a reputation at home, where people will buy his honey in preference to any other, having learned that it is always good, and that reputation is slowly growing in adjacent neighborhoods; but what John wants, is some way whereby, no matter how large a crop he has, he can put it upon any market in the land, feeling sure that the public will have the same confidence in it that his immediate acquaintances have.

Now, this trade-mark is intended to cover this very ground. It is simply a mark that the public will soon recognize as being evidence that any honey on which it is found, is the Simon-pure article, that has come from the hands of a bee-keeper, for the use of the trade-mark will not be given to any others. Only members of the Union will be allowed to use the trade-mark, and this will immediately swell the ranks, for it will especially meet the wants of that large class who have not a wide enough market, and who can thus depend on a ready-made reputation, that is current anywhere. As the public becomes educated with regard to the trade-mark, it will, in a little while, refuse to buy any honey not properly marked, and thus adulterators will give up the business in disgust, simply for lack of a market.

Thus, I have given, as fairly as I understand it, the gist of the argument in favor of a trade-mark. It is to protect against adulteration. And it may be well, in this connection, to inquire whether there is any better way to fight adulteration. There are State laws against it, but, on page 319, friend Heddon takes the ground that if we do not secure the trade-mark, that we would better not make any attempt to enforce those laws. Indeed, he thinks that if we have no trade-mark, there is nothing left for us to do but to keep still and let adulterators entirely alone. This, presumably, on the ground that adulteration is exceedingly hard to detect, and still harder to prove, and that a prosecution would only educate the people as to the existence of adulteration.

Let us look at the objections. Return to the case of John Smith: He has taken great pains to produce a superior article! His reputation is to that effect, just so far as that reputation reaches, and when he adopts the trade-mark, if it makes *any* difference, it will be to substitute for John Smith's reputation, the reputation of that trade-mark. In other words, the average reputation of all the honey covered by that trade-mark. For it must be remembered that a great deal of honey—genuine honey—is of very poor quality, and John pools his chances in the average lot.

So it seems to me that the private trade-mark of John Smith is worth more to him than one which covers a poorer class of honey, and those who, like John, have taken pains to build up a good reputation as to quality, will hardly want to divide up that reputation with those who put upon the market a poor, half-ripened product. Still, for the sake of the general good, John might be willing to leave out of consideration his personal profit, only so that adulteration might be stopped. But let us see how it would work, supposing all bee-keepers went into it, heartily resolved to stand by each other. The number would very soon run up into the thousands, and, of course, there would be no restriction as to who should join, only so the required amount should be paid.

Among others, Richard Roe & Co., of Pekachunk, join the ranks, and it turns out that the "Co." is none other than the notorious adulterator, John Doe, of Chicago. What can you do about it? Even supposing you can stop his using the trade-mark under that name, there are a thousand other names under which he can get it.

As the papers have been relied on to spread the knowledge of the trade-mark, you may rely upon them, with still more implicit confidence, to spread the news that spurious honey is sold under that same trade-mark. If it be true that, in the event of failure to establish a trade-mark, the only thing left is to keep still, for fear of raising a smudge that will do us harm, then the same reason would hold good, and make it necessary to keep still, no matter how many adulterators were using the trade-mark.

I have tried to give a summary of all the arguments that have been advanced in favor of the use of a general trade-mark, and I know that I have not given all the arguments against it. As the editor of the *American Bee-Keeper* says, "There are several arguments on either side of the trade-mark question, but we think the arguments *against* it are the heaviest."

Marengo, Ills.

Adulteration—Michigan Convention.

HARMON SMITH.

Soon after I commenced keeping bees, I became convinced that the clamor for comb-honey, and the prejudice against liquid (extracted) honey was not only unjust and ill-founded, but had its origin mainly with ignorant bee-keepers and sellers of honey. This conclusion I gathered from reading modern bee-periodicals, books and circulars, and from general observation.

Honey is *honey*, whether in comb, tin or glass, and it is universally admitted that two pounds of extracted-honey can, ordinarily, be obtained to one of comb-honey. Then, why this "craze" about comb-honey? I allege that it is on account of the false education above indicated. If you please, then, this article is intended to elucidate and explode these errors.

Last Fall, when I commenced putting upon our city market the beautiful, clear, extracted white-sage honey, at every step of its introduction I was met with such questions as, "Is it bogus?" "Is it pure?" "Is it really honey?" "How much sugar," or "How much glucose is there in it?" etc., through all the ramifications of the "Wiley lie," and a Michigan lie, which has often been thrown in my face, and will be found on page 54 in the Reports of the Michigan Board of Agriculture for 1886.

A man by the name of J. H. Peabody, in a lecture upon "Evolution in Farming," before the Rochester Institute, on Feb. 4, 1886, among other foolish, false and defamatory things, said:

> Evolution in another form is trenching on our domain. Chemistry imitates all the products that seem desirable. Do you want raspberry, strawberry, pine apple, or orange extracts? The chemist stands behind the soda fountain, and will mix you something better, apparently, than the fruit itself would make. Do you want butter? He will evolve it for you. Do you want HONEY? We can make it from glucose, or feed that to the bees and they will make it. And so on *ad nauseam*.

This is in one of the public books, published at the expense of the taxpayers, and scattered all over this broad land.

Another false, slanderous and defamatory statement was printed in the Detroit *Journal* of Sept. 2, 1890, and, together its refutation, is as follows: In an interview by a reporter of that paper, under the head-line of "Grossly Adulterated," Dr. John E. Clark, among other things, is made to say:

> The last thing in the world you would expect to be adulterated is honey comb, but it is done in a very successful manner, on Grand River avenue; so successfully, in fact, that the bees themselves are deceived with it, and eat it in Winter. The ingenious individual who does this, forces a composition of beeswax, paraffine and other stuff up through sexagonal dies from below, by hydraulic pressure, and as it comes out at the top, it is cut off with a knife. It looks nearly as perfect as the bees could make it. It was stated sometime ago that no honey comb was being manufactured in this country, and this is the first instance I know of. The comb is filled with a substance composed of glucose, flavoring extracts and ethers, and there you have the pure, sweet honey of the present day.

But I was writing about extracted-honey. Nevertheless, please read the cross-questioning of the *Journal's* witness:

> IONIA, Mich., Jan. 13, 1891.
>
> Dr. John E. Clark—I am a bee-keeper. I believe that, in the Detroit *Journal* of Sept. 20 last, you referred to some one in your city making comb for honey to give to the bees, so they could fill it with glucose. I wish you would please give me the name and address of those parties, as I would like to get some of it. Did you see them make, or fill it? If so, do you think it would be healthy? What do you *know* about it? I enclose stamp for reply, and much oblige, yours, etc.,
>
> HARMON SMITH.

To this Dr. Clark replied:

> DETROIT, Mich., Jan. 17, 1891.
>
> Mr. H. Smith, Ionia:—Dear Sir—I am not aware of any firm manufacturing comb for bees to fill with glucose. You must have misunderstood the article.
>
> I did say that a firm was manufacturing an imitation comb, which, if the bees could be induced to use it, would be a great saving in honey. The firm in question, I understand since, has gone out of business.
>
> Yours truly, J. E. CLARK.

What are we to think of a public newspaper that will thus "grossly" *adulterate* the truth? If its other utterances are upon a parallel with this slander of *comb-honey*, what are we to expect in other matters?

ANOTHER GREAT MISTAKE.

In penning the following elucidation, I feel rather like placing "my hand upon my mouth, and my mouth in the dust." Certainly none but the best of good will is entertained severally and collectively for the gentlemen composing the late Michigan State Bee-Keepers' Convention. I regard them as the lights of the profession to whom I would look, as to a father, for good, and only good, things. If I was indignant at what has been shown before, I was deeply shocked and pained at their resolutions, which will be found on page 88.

Knowing as I do, somewhat of the way resolutions are introduced and passed by the average convention, I did not believe that this one represented the sober second thought, sense or knowledge of the members of the convention. So believing, and in order to refute the allegation against my business, and the large number of the fraternity who retail extracted-honey, I addressed the following letter to each of the Committee on Resolutions:

Ionia, Mich., Jan. 13, 1891.

Dear Sir :—I have before me the American Bee Journal of this week, containing the proceedings of the last Michigan Bee-Keepers' Convention at Detroit. I wish you would give me the names of all of the parties you know who are making, selling, or offering for sale, adulterated liquid honey, to which your resolutions refer. I am a bee-keeper, and would like to get some of the stuff, so as to convince my customers and others that I am selling a pure article.

Yours respectfully and fraternally,
Harmon Smith.

Following is the gist of the replies received :

I do not remember the address of the parties, but have referred your letter to a friend, who will answer it. He has been selling honey in Detroit this Fall, and knows all about them. P. B. Knight.

Mr. Byron Walker, of Capac, Mich., can, I think, give you the information you desire. A. W. Fisher.

Mr. Walker has not replied to my inquiry, although I have written him twice.

Wishing to ascertain what the older leading members of that convention *knew* about the matter, I addressed a letter to several of them, from which the following is an extract:

Ionia, Mich., Jan. 16, 1891.

My Dear Sir :—I think the resolutions * * * do a great, and almost irreparable, injury to our industry. Will you please give me the names of those whom you *know* are selling or making adulterated honey ? * * * If such men are within reasonable distance, I will see that they are prosecuted‡; if too remote for my personal attention, I think I can present the matter to the prosecutors of this State in such a manner as to at least prevent future sales. Please give me the names and addresses of the "adulterators."

Yours fraternally,
Harmon Smith.

‡[We are in receipt of a letter from Mr. Walker, in which he gives the names of two firms who are putting up the most of this adulterated honey, and excusing his delay in answering our letter by the statement that he has been absent from home for several weeks. We will furnish these names to Mr. Smith, and he can then make good his promise to see that they are prosecuted.—Ed.]

Following is the substance of the replies received :

I do not know who the adulterating parties are. James Heddon.

You can get names of adulterators by writing to Byron Walker, Capac, Mich. A. J. Cook.

Byron Walker probably knows more about the matter than any other man in the State, and I think he will put you on the right track Geo. E. Hilton.

Byron Walker was the one who brought up the matter, drew up the resolution, and put the matter through. The names of the adulterators were mentioned in private conversation, and I think Mr. Walker could give them. W. Z. Hutchinson.

Byron Walker can give you the names of the firms. He is the one who reported the matter to the convention. It is a fact, that a large quantity [of adulterated honey] is on the market in Detroit all the time, and it has no taste of honey, and never has any name on the label. M. H. Hunt.

Now, does this proof indicate that there was any foundation whatever for the passage of those resolutions ? I say, no ! None of these witnesses give any information sustaining the statement "that many of the cities of this State are supplied with adulterated honey."

The concluding remark of Mr. Hunt might be construed into an intimation that way ; but is an article which "does not taste like honey" an adulteration ? I say that the allegation of that resolution is utterly and completely disproven, and all I can now see left is, for the members of that convention to do what they can to undo the injury they have done to the trade, and to the honey-producers of the State of Michigan.

The law is ample for punishing any

person engaged in this traffic. Get the facts, take them before your prosecuting attorney, and, for each sale, have the party arrested and convicted of obtaining money by false pretenses. You will find the law relative to adulterated honey and other foods ample and sufficient. It may be found in the office of any Justice of the Peace. (See Michigan Session Laws of 1885, page 22, and Session Laws of 1881, page 346.) Again, I say, gentlemen of the convention, if you *know* of any violation of this law, do not try to hide behind the Bee-Keepers' Union, or anybody else, but make complaint in *propria persona* to your prosecuting attorney, whose business and pleasure it undoubtedly will be, to convict such, and all other adulterators. But I do most solemnly protest against this onslaught upon the small producers, who cannot afford to get all the appliances and trade-marks of the large dealers.

Ionia, Mich., Jan. 28, 1891.

Ohio State Bee-Keepers' Convention.

MISS DEMA BENNETT.

The annual meeting of the Ohio State Bee-Keepers' Association was held at the Merchant's Hotel, Toledo, on Feb. 10 and 11, 1891.

The Convention was called to order by the President, Dr. A. B. Mason, and after a short report from the Secretary, the first subject on the programme, "How Can this Convention be Made Interesting and Profitable?" was taken up.

W. Z. Hutchinson, of Flint, Mich.—Make them talk.

E. R. Root—I endorse that, and would add, have plenty of recess.

H. H. Overmeyer—I like to meet, and become acquainted with, bee-keepers. To me, that is the best part of the convention.

J. F. Moore—Have some object. I want to have some one tell me how to manage, so as to prevent swarming.

J. B. Hains—Do not wait for the other fellow to speak.

E. E. Hasty—When some one has the floor, go for him and ask questions.

Dr. Mason—Let it work itself.

A recess was then taken. After recess, E. E. Hasty read a very interesting essay on "The Relation of Honey-Eating to Longevity," which brought out no opposition in the discussion which followed, several claiming that the use of honey had restored them to health, while others claimed that it had kept them from the clutches of *La Grippe.* One brother, who wants honey three times a day, and a taste between meals, went visiting once where he did not get any, and lost several pounds in flesh.

AFTERNOON SESSION.

The Secretary read a telegram from Chas. F. Muth, who was to have read an essay in the evening, saying that, on account of illness in his family, he would be unable to be present, but would send the essay to the AMERICAN BEE JOURNAL.

The President delivered his annual address.

On motion, a Committee on President's Address, consisting of five members, was appointed, as follows: J. T. Calvert, E. E. Hasty, J. B. Hains, P. M. Puhl, and N. Case.

Committee on Resolutions—E. R. Root, F. A. Eaton, J. Y. Detwiler.

Committee on Statistics—H. H. Overmyer and W. Z. Hutchinson.

An essay on the subject of "Bee-Laws," sent by Dr. C. C. Miller, of Marengo, Ills., who is an honorary member of this association, was read by the Secretary; also a letter containing a kind greeting from him, and expressing regret at his inability to be with us.

A motion prevailed that the chair appoint two members to assist him in making recommendations on bee-legislation.

A recess was then taken. After which E. R. Root gave us his thoughts on "Getting Used to a Thing."

H. H. Overmyer dips a strip of muslin in a mixture of 1 part tallow, 2 parts beeswax and 4 parts rosin—which has been melted and stirred well—then wraps the strip around the edge of the pail, and puts the cover on. This will prevent any leakage of honey.

In answer to the question, "Why does Dr. Mason has so much propolis in his locality?" the Doctor said, "I cannot tell you, ask Mr. Hasty, who said that he thought sunflowers, and flowers that are akin to it, caused a good deal of the trouble."

Mr. Harris—We have more propolis in our locality from milkweed than sunflower.

"Aside from the amount of honey consumed, are drones a detriment to the colony?"

W. Z. Hutchinson—I cannot see why they are.

P. M. Puhl—When they get to be a detriment to the hive, the bees will take care of them.

"What shall we do to protect our bees if our neighbors persist in spraying fruit trees when in full bloom?"

Dr. Mason—Be on good terms with your neighbor; convince him that he is not doing his trees good, and is doing the bees harm.

E. R. Root quoted Ashmead: "Paris green is not soluble in water." Some claim that the bees get the nectar and leave the heavy green.

Mr. Harris—Get a bulletin from the Experiment Station, and show to the fruit dealers.

"Has anyone present any experience with a house apiary?"

J. B. Hains—I have an expensive one, but do not like it for the purpose for which it was built, and I do not like to work in it.

"Will dry lime keep out the moth miller from surplus combs?"

Not unless you cover it entirely.

"How are we to know the Italian bee, since four or five-banded Italians are being advertised?"

Dr. Mason—If they are advertised as Italians, that settles it.

"What should we do to protect ourselves against foul-brood?"

J. B. Hains—Do not buy, or even accept as a gift, anything from a foul-brood locality.

Adjourned until 7 p.m.

EVENING SESSION.

As Mr. Muth was not present, the President suggested that we take up the subject of his essay, "The principal cause of the failure of the honey crop in my neighborhood, in 1890."

W. Z. Hutchinson—What can you do about it? Perhaps you might get your neighbors to sow clover, buckwheat, etc.

Mr. Harris—The atmosphere must be right before honey will be secreted.

W. Z. Hutchinson—Yes; but you must have the blossom ready for the right atmosphere, when it does come.

The President asked Mr. Harris if he did not assume that fertilization of fruit was due to the bees?

Mr. Harris illustrated by fertilization of corn, and claimed that peaches, which were nearly quarter size, fell off because not fertilized.

Mr. Morris—The cold, wet season came on at clover bloom, and prevented the secretion of honey. After the weather changed, honey was received.

J. B. Hains—The diminution of the honey yield is largely due to the destruction of our forests, while the cold, wet weather prevents the secretion of honey.

E. R. Root spoke of his observations in the East, and corroborated this view, saying, we must have big colonies ready when honey does come.

Milo George—Some western bee-keepers, on the prairies where there is no timber, still have big crops.

E. R. Root suggested that low, waste lands on streams were as good as forests.

Bruce Hobbs confirmed the strong swarm idea.

Mr. Harris—Basswood will yield honey sometimes, and sometimes it will not; and the same is true regarding Fall flowers.

E. E. Hasty—I think there is a blight on basswood in this locality, which is the cause of cutting off the nectar; it is a similar blight to that on the hollyhock, which was brought from England.

Dema Bennett then read an essay, entitled, "How can honey producers best reach the trade; or, do we need a Union Trade-Mark?"

W. Z. Hutchinson thought the essay covered the ground about the trade-mark.

E. R. Root—A uniform trade-mark might convey the impression that there is a good deal of adulteration, which we think is not so.

E. E. Hasty—As all are not alike careful, those who furnished the best would have to suffer because of the careless ones.

A report of the committee appointed last year, in Cleveland, to send suspected honey to the State chemist, was given by J. B. Hains.

There is a good deal of spurious honey in the Cleveland market, put up by Williams Bros.

Adjourned until to-morrow morning.

(*To be continued.*)

Binders made especially for the Bee Journal for 1891 are now ready for delivery, at 50 cents each, including postage. Be sure to use a Binder to keep your numbers of 1890 for reference. Binders for 1890 only cost 60 cents, and it will pay you to use them, if you do not get the volumes otherwise bound.

CONVENTION DIRECTORY.

Time and place of meeting.

1891.
April 1, 2.—Texas State, at Greenville, Texas.
J. N. Hunter, Sec.

April 9, 10.—Missouri State, at Boonville, Mo.
J. W. Rouse, Sec., Mexico, Mo.

May 6.—Bee-Keepers' Ass'n. and Fair, at Ionia, Mich.
Open to all. Harmon Smith, Sec., Ionia, Mich.

May 7.—Susquehanna County, at Montrose, Pa.
H. M. Seeley, Sec., Harford, Pa.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—The Editor.

North American Bee-Keepers' Association

President—P. H. Elwood....Starkville, N. Y.
Secretary—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

President—James Heddon ..Dowagiac, Mich.
Sec'y and Manager—T. G. Newman, Chicago.

Bee and Honey Gossip.

Ready to Retire.

I am now in my 75th year, and feel very much like superanuating, but as I have over 60 colonies of bees on hand, and no sale for them, at a reasonable price, I shall try to manage them another season, if spared. I have been a reader of the Bee Journal for 10 years, and have learned about all I know regarding the management of bees and honey through it.

Salem, Iowa. A. S. Camblin.

Bees in Oklahoma.

Nearly one year ago I brought 4 colonies of bees here from Iowa, but was afraid to bring more. They did very well, although we had 7 weeks of dry weather in June and July. They increased to 25 colonies, and gathered 240 pounds of surplus comb-honey, of the best quality, in one-pound sections. I do not know what they work on except red-bud and golden-rod, though once I saw them on sunflowers, and also on cotton. Is cotton a good honey-plant? Flowers are more plentiful here than in Iowa, and honey-dews were very rich last year. This will be a splendid country for bees, when we get clover and smart-weed. One man got 7 swarms from one colony. I also know of four others who have a few bees, and their success was generally equal to mine. It is no trouble to winter bees here. Wild bees do well in the timber, and several trees have been found that were rich in honey. I knew of one swarm that was taken from a tree and transferred to a hive, and in just three weeks it gave a swarm. I had one swarm issue, and in 12 days it gave another swarm. There are very few people here who have any bees. Comb-honey is worth 20 cents per pound, and extracted, 12½ cents.

E. J. Rockefeller.
Oklahoma City, O. T., Mar. 12, 1891.

[Cotton yields plenty of pollen, and usually a little honey, but last year it was credited, in some instances, with yielding profusely of excellent honey.—Ed.]

Bees are Doing Well.

My colonies of bees are all doing wel as are all those in this locality. I especially like to read Mrs. Harrison's articles in the Bee Journal; they are practical and interesting.

Jacob Moore.
Ionia, Mich., March 19, 1891.

Not Discouraged.

Last year was not a very good one, but I am not discouraged yet, as everything points to a good harvest next season. Bees have wintered well up to the present time, but the ground has been covered with snow for two weeks, and if the weather does not moderate in a few days, I fear that there will be some loss by starvation, as a great many colonies went into winter quarters short of stores; but if the temperature rises soon, so that we can feed our bees, we will bring most of them through. The Bee Journal is so much improved that I do not see how you can print it for the money. I cannot keep bees without it.

C. T. Henderson.
Lebanon, Ind., March 14, 1891.

Asters and Golden-Rod.

J. W. Adams, on page 357, asks about the peculiar sour smell. It is from asters *and golden-rod*. It is one of the things that I look forward to every Fall. After a warm, clear day in September, the smell can be noticed for eight rods away from a fair sized apiary. It always means that Fall honey is coming in. Go to the hives then, and get your face near the entrance of a hive, and the odor is too strong for comfort. I can assure Mr. Adams that it is not from sour honey, although a good wet spell, right after such an odor, may bring sour honey. ALLEN LATHAM.

Cambridge, Mass.

No White Clover.

There was no honey gathered in this section of the State last year, and bees required to be fed. I am feeding my bees at this date; they number 5 colonies, and I am wintering them on the summer stands. Our Winter has been mild, the mercury not having been as low as zero, up to this time. There is no white clover here, and I have just finished sowing alsike and white clover seed. W. R. BLALOCK.

Elk Falls, Kans., March 17, 1891.

Honey Crop a Failure.

Our honey crop proved a failure last year, owing to the drouth, which continued until the Fall flowers were blasted, and the sumac did not seem to have any nectar, leaving the bees, practically, no pasturage.

OTIS N. BALDWIN.

Baxter Springs, Kans.

Good Honey Crop.

I have been hurt by the statement of Mr. Blackburn, at the Northern Illinois Convention, published on page 77. It is this: "That the keeping of 'fancy poultry' requires too much falsification" for me "to make money out of it." I have been keeping bees and breeding fancy poultry for five years. My main income has been from the local market for poultry and fresh eggs. I have tried to be strictly honest—honest as God wishes. I can show by my letter file—and I file all my letters—nothing but praise from buyers. I have been keeping 150 pullets and hens over Winter, raising several hundred each Summer, and keeping most of the pullets. They must be hatched during March and April. The chicks are well started by the time the bees need much attention. I have always sold all my product to consumers, selling honey to the same buyers. This Winter I was not able to retail my honey, so I bought 12 crates, holding 12 sections each. These I filled with one-pound sections, after dividing the lid in two parts, nailing the narrow one fast to the crate, and hinging the other part to it. The crates I reserved. By Dec. 1 I had my crop of over 850 sections, sold—at 15 cents per section first, but when I found how short the crop was, I received 16⅔ cents. I had no freight to pay, and still have the crates. It required 12 sections to weigh about 11 pounds, so I received about 18 cents per pound. Extracted-honey, of good quality, put up by a man of known honesty, will sell faster than the best quality of comb-honey. Before this Winter, scarcely any extracted-honey was sold here, but when it was offered by a producer living near, it went much faster than comb. I would ask bee-keepers this question: Are there plenty of cherry trees in your locality? If not, be sure to plant some this Spring. Plant a dozen of the large white variety. They will give you fine fruit to eat, and from $2 to $12 worth to sell, from each tree. They yield as much honey as the apple, and bloom one week earlier, which means that the bees will be ready for clover one week sooner. The red, sweet, and common black cherry will yield nearly as much. Be sure your bees have these, unless your crop is mainly basswood, then it is not so particular. We have nothing but clover. Last season we were blessed with a full crop.

Pottstown, Pa. W. W. KULP.

Good News.

Bees went into winter quarters in good condition, in this vicinity, and, so far as heard from, are wintering well.

FRANCES MACCONOUGHEY.

Hilliard, Mich., March 12, 1891.

Expects a Good Crop.

I have 40 colonies of bees, in Langstroth hives, which are in my cellar, and, so far, they are wintering all right, and have plenty of stores. If the Spring is favorable, I see no reason why we should not have a good crop of honey from white clover, that being our principal honey plant. F. COUNSELMAN.

Doylestown, Wis., March 17, 1891.

Not What was Intended.

On page 347, first column, bottom line, the figures 1870 are not what was intended. I infer that the typo read the figure meant for 9 as 7. The paragraph in which the figures appear, shows on its face that there is a mistake. In reading the sentence, I discover that I failed to word it as I intended. Though incorrect in the number of years (eight) mentioned, in point of fact, I am strictly correct in my statement, that Mr. Cheshire did not announce foul-brood to be a germ disease until several years later than I did. C. J. ROBINSON.

Richford, N. Y.

Using Old Combs for Swarms.

I am a novice in bee-keeping, having started last Spring with 16 colonies. They gave me 700 pounds of surplus, last season, but went into Winter quarters in bad condition. On March 15, I examined them, and found that 2 colonies had starved, and more were verging on that condition, so I began feeding them. I use the Simplicity hive. Can I use combs of last season for swarms this season? My bees are in the cellar. When would it be advisable to place them on the summer stands? IRA J. WOOD.

Vernon Centre, N. Y., Mar. 17, 1891.

[You can use the combs from last season, if they are suitable for the hive. Take your bees from the cellar as soon as settled warm weather comes.—ED.]

Feeding Necessary.

Bees with plenty of stores are wintering in good condition; have lost 2 colonies, out of about 70, by starvation. Most of the bees will need a little feeding if the Spring is backward. T. S. HURLEY.

Welton, Iowa, March 19, 1891.

Good Home Market.

Bees were flying lively on March 15 and 17. On March 15 the temperature was as follows: At 6 a.m., 16° above zero, and 40° in the cellar. At noon, 42° above; afternoon, 56° above. Sun shone all day. March 17—6 a.m., 28° above zero, and 40° in the cellar; at 12 o'clock, 56° above; at 3 o'clock, 66° above. Sun shining all day. Bees were very lively, and returned to the hives all right. Those in the cellar I could see resting on the bottom-board, no dead bees on the floor, and the hives very heavy. Sold all of my honey in the home market, and could have sold as much more. The Honey Almanac is just the thing for the apiarist, and for housekeepers. The Atlas and Dzierzon's Bee-Book, are mines of knowledge to the bee-keeper, and would be very cheap at double the price. D. D. DANIHER.

Madison, Wis., March 20, 1891.

Too Much Rain in North Carolina.

Maples have been in full bloom for about two weeks, but in all this time bees have not been able to work on the bloom more than four days. We have had rain, rain, rain. I never *did* see it rain so long and so much, and it will be a great injury to the honey crop, as the maples always give bees a good start, when the weather will permit them to work. Our next bloom will be on the plum and peach. We long for fair, warm weather. JOHN D. A. FISHER.

Faith, N. C., March 12, 1891.

Transferring Bees.

I have bought some bees in box hives. 1. When should I transfer them to Langstroth hives—this Spring or next Fall? 2. Should I transfer the old comb or give them comb foundation. Please answer these questions in the BEE JOURNAL. J. E. MAY.

Sincarte, Ills., March 20, 1891.

[Some warm day in the early Spring will give good opportunity for transferring them. Save the brood, by all means, but give them full sheets of comb foundation in all the other frames.—ED.]

Wintering Bees.

I think bees can be wintered on the summer stands, in single-walled hives, by having a cover of extra depth, the sides reaching the ground, and leaving a space of about one inch between the walls, or by packing them in chaff, in the following manner: Nail up a square box about 2 inches larger than, and as high as, the hive; fill in around the hive with chaff. When this is done, cover the hive with a large board, wide enough to turn the rain and snow, and you have a hive that will answer all purposes as well as the costly chaff hive does, and when Spring comes you can take off the top, remove the box and chaff, and the hive will be ready to handle, the same as though there had never been any chaff about it. I bought a colony of hybrids last June, and they gave me about 20 pounds of nice comb-honey, in one-pound sections, and late last Fall I packed them in chaff, as above, and they are doing nicely at present. E. F. CLAPP.

Dolson, Ills., March 13, 1891.

Poor Quality and Small Crop.

I have kept bees for 16 years, and last year was the nearest to a failure of the honey crop that I ever experienced. I had 32 colonies, Spring count, and had no increase. My crop of honey was of a poor quality, and averaged about 10 pounds of comb-honey to the colony. I have some Italians, but most of my bees are hybrids. The Italians are the gentlest, and the best honey gatherers. I have seen them working on red clover, but they will not if there is other pasturage. I winter my bees on the summer stands the most successfully, my losses having been very light. I have tried several patterns of hives, but in my judgment the Langstroth is the best. There has been a great loss of bees in this locality; all swarms of last season are dead, as far as I have learned.

J. M. CASHMAN.

Hermon, Ills., March 14, 1891.

Something Unusual.

Bees have wintered well in this vicinity, though it is perhaps too early to say just how they will come out. It is very cold here at present, even in the middle of the day. The coldest weather has been in March, which is something very unusual. Amateur bee-keepers should "look sharp" that their bees do not come out on warm days, to alight on the snow, become chilled, and perish. When they cannot arise from the snow on account of cold, they should be confined to their hive, by throwing a few handsful of snow against the entrance, till it is warm enough for them to fly freely.

BUSY BEE.

Connecticut, March 17, 1891.

Thankful for Suggestions.

Judging from the illustration on page 280, one might think you would have to stand to manipulate the Hubbard section press; but it is not so. I lean the press against something, as seen in the cut, with the lower end between my feet; thus I can sit down and work the press better than if standing. I have improved the one I use by boring a hole in each upper corner of the lower block that holds the section, to place my little fingers in, to help pull the press back when the section is finished, and at the same time have my thumbs, and two fingers of each hand, to place the section with. I bore the hole from the upper end downward, and so near the edge that it cuts clear out. I think friend Hubbard ought to send out printed directions for using the press. One person wanted to know if it should be laid flat down to work it, and said he wanted the other kind of press. I am very thankful for the suggestions in regard to dampening sections. I shall try them all, and use the best. Am afraid that pouring water into the grooves, before the sections are unpacked, will dampen them too much, like a man here who throws the whole crate into a tub of water, thus making a bad job of it. E. C. EAGLESFIELD.

Berlin, Wis.

Hints to Young Apiarists.

At this season of the year the young enthusiast will pine for warm sunny days, that his bees may be flying; if the mercury stays low enough to keep the bees at home, it will be to their advantage, until the time comes for them to get natural pollen.

Success in bee-culture depends on the man; and energy, industry and economy are qualities that he must possess. The boy that saves his pennies to invest in a bee-book, and then stays at home with his bees rather than to sit around the corner-grocery, will make bee-keeping a success.—W. S. POUDER, in the *Indiana Farmer*.

Convention Notices.

☞ The 13th annual session of the Texas State Bee-Keepers' Association, will be held at Greenville, Hunt Co., Texas, on April 1, 2, 1891. All interested are invited. J. N. HUNTER, Sec.

☞ The 8th semi-annual meeting of the Susquehanna County Bee-Keepers' Association will be held at Montrose, Pa., on Thursday, May 7, 1891.
H. M. SEELEY, Sec., Harford, Pa.

☞ The Fourth semi-annual meeting of the Missouri State Bee-Keepers' Association, will meet at Boonville, Mo., on Thursday and Friday, April 9, 10, 1891. There are quite a list on programme for essays, including some from ladies. A cordial and pressing invitation is extended to all bee-keepers, and their wives and daughters, and any other ladies, to attend the Convention. Rates have been secured at the two leading hotels for those in attendance. Come, and let us get acquainted, and have an interesting meeting. J. W. ROUSE, Sec., Mexico, Mo.

Clubs of 5 New Subscriptions for $4.00, to any addresses. Ten for $7.50.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE-PAPER IN AMERICA
BEE JOURNAL

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ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

☞ Subscribers who do not receive their papers promptly, should notify us at once.

☞ Send us *one new* subscription, with $1.00, and we will present you with a nice Pocket Dictionary.

☞ The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to pay for another year.

☞ Systematic work in the Apiary will pay. Use the Apiary Register. It costs:

For	50 colonies (120 pages)	$1 00
"	100 colonies (220 pages)	1 25
"	200 colonies (420 pages)	1 50

☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

The Convention Hand-Book is very convenient at Bee-Conventions. It contains a simple Manual of Parliamentary Law and Rules of Order for Local Bee-Conventions; Constitution and By-Laws for a Local Society; Programme for a Convention, with Subjects for Discussion. In addition to this, there are about 50 blank pages, to make notes upon, or to write out questions, as they may come to mind. They are nicely bound in cloth, and are of the right size for the pocket. We will present a copy for one new subscription to the BEE JOURNAL (with $1.00 to pay for the same), or 2 subscribers to the HOME JOURNAL may be sent instead of one for the BEE JOURNAL.

◆

The "Farm Poultry" is a 20-page monthly, published in Boston, at 50 cents per year. It is issued with a colored cover and is finely illustrated throughout.

We have arranged to club the AMERICAN BEE JOURNAL with the *Farm-Poultry* at $1.35 per year for the two. Or with the ILLUSTRATED HOME JOURNAL at $1.75.

◆

If you have a desire to know how to have Queens fertilized in upper stories, while the old Queen is still laying below—how you may *safely introduce* any Queen, at any time of the year when bees can fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact, everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and is as interesting as a story. Price, $1.00. For sale at this office.

◆

When talking about Bees to your friend or neighbor, you will oblige us by commending the BEE JOURNAL to him, and taking his subscription to send with your renewal. For this work we will present you with a copy of the Convention Hand-Book by mail, postpaid. It sells at 50 cents.

◆

Calvert's No. 1 Phenol, mentioned in Cheshire's Pamphlet on pages 16 and 17, as a cure for foul-brood, can be procured at this office at 25 cents per ounce, by express.

CLUBBING LIST.

We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

	Price of both.	*Club.*
The American Bee Journal	$1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Guide	1 50	1 40
Bee-Keepers' Review	2 00	1 75
The Apiculturist	1 75	1 65
Canadian Bee Journal	1 75	1 65
American Bee-Keeper	1 50	1 40
The 7 above-named papers	6 00	5 00
and Langstroth Revised (Dadant)	3 00	2 75
Cook's Manual (1887 edition)	2 25	2 00
Quinby's New Bee-Keeping	2 50	2 25
Doolittle on Queen-Rearing	2 00	1 75
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 60	1 50
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	2 20
Western World Guide	1 50	1 30
Heddon's book, "Success,"	1 50	1 40
A Year Among the Bees	1 50	1 35
Convention Hand-Book	1 50	1 30
Weekly Inter-Ocean	2 00	1 75
Toronto Globe (weekly)	2 00	1 70
History of National Society	1 50	1 25
American Poultry Journal	2 25	1 50
The Lever (Temperance)	2 00	1 75
Orange Judd Farmer	2 00	1 65
Farm, Field and Stockman	2 00	1 65
Prairie Farmer	2 00	1 65
Illustrated Home Journal	1 50	1 35
American Garden	2 50	2 00
Rural New Yorker	2 50	2 00
Nebraska Bee-Keeper	1 50	1 35

Do not send to us for sample copies of any other papers. Send for such to the publishers of the papers you want.

◆

Supply Dealers desiring to sell our book, "Bees and Honey," should write for terms before issuing their Catalogues.

◆

☞ The Union or Family Scale has been received, and I am much pleased with it. W. H. KIMBALL.
Davenport, Iowa.

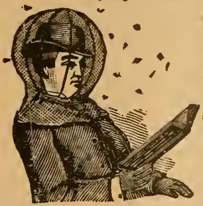
◆

☞ I am well pleased with the Sewing Machine you sent me; any person wanting a good Sewing Machine, one that is equal to the high-priced machines which are sold by agents, can do no better than to send for your $15.00 Machine. They will be agreeably surprised when they see it. Mine is really better than I expected.

W. J. PATTERSON.
Sullivan, Ills., Dec. 5, 1890.

The "Globe" Bee Veil

Price, by Mail or Express, $1.00.



There are five cross-bars united by a rivet through their center at the top. These bars are buttoned to studs on the neck-band. The bars are of best light spring steel. The neck-band is of best hard spring brass. The cover is of white bobinet with black face-piece to see through.

It is very easily put together; no trouble to put on or take off; and folds compactly in a paper box 6x7 inches, by one inch deep The protection against bees is perfect—the weight of the entire Veil being only five ounces.

CLUBBING OFFER.

We will send this Veil and the Bee Journal one year for **$1.75.** Or, we will give the Veil **Free** for three (3) **New** Subscribers to the Bee Journal, with $3.00 to pay for them.

Subscriptions to the Home Journal may be included in all Clubs, counting two (2) Home Journals as equal to one (1) Bee Journal.

◆

We send both the Home Journal and Bee Journal for one year, for $1.35.

◆

Red Labels are quite attractive for Pails which hold from 1 to 10 lbs. of honey. Price, $1.00 per hundred, with name and address printed. Sample free.

◆

Please send us the names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you.

◆

A Nice Pocket Dictionary will be given as a premium for only **one new** subscriber to this JOURNAL, with $1.00. It is a splendid little Dictionary—just right for the pocket. Price, **25 cents.**

◆

We Now Have a full stock of everything needed in the apiary, and can fill orders at a moment's notice. Order before the rush.

Mr. C. Weckesser, known as a bee-keeper, is now located at Niagara Falls, where he has purchased land and rented Cayuga Island, where his business is carried on with renewed vigor and energy, says the *Niagara Times*. Notice his advertisement on page 428.

The New Onion Culture, is the title of a new pamphlet by T. Greiner, of La Salle, N. Y. It is a "story for young and old," which tells how to grow 2,000 bushels of fine bulbs on one acre, and fully explains the new system. It contains 64 pages, and is nicely printed and illustrated.

Welcome.—Please permit me to extend my endorsement of the "Illustrated Home Journal," and may prosperity crown your efforts. It is a welcome periodical in my household, and its contents are devoured with much pleasure.

Chicago, Ills. M. H. MANDELBAUM.

Do You Want a Tested Italian Queen free of cost? Jacob T. Timpe offers one of his five-banded Golden Italians as a present for the first order for his Potatoes, from any State. This is a rare opportunity to obtain a valuable Queen. See our advertising columns.

Back Numbers.—We want Vol. 2 of the AMERICAN BEE JOURNAL. Also No. 52 for Dec. 28, 1881; and No. 21 for May 21, 1884.

Any one having these for sale will oblige by sending a postal card to this office, stating price; and if not already supplied, we will negotiate for them.

Bee-Keeping for Profit, by Dr. G. L. Tinker, is a new 50-page pamphlet, which details fully the author's new system of bee-management in producing comb and extracted-honey. and the construction of the hive best adapted to it—his "Nonpareil." The book can be had at this office for 25c.

HONEY AND BEESWAX MARKET.

DETROIT, March 21.—Comb-honey is quoted at 14@15c; demand light. Extracted, 7@8c. Beeswax in fair demand, 28@29c.
M. H. HUNT, Bell Branch, Mich.

NEW YORK, March 21.—Market is bare of comb-honey. We quote: Extracted, buckwheat, 7@7½c; California, in good demand, at 6¾@7¼c, and market well supplied; Southern, none in market. Beeswax, 25@27c.
HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

KANSAS CITY, March 21.—Market continues about the same; stocks becoming light; no receipts. We quote: White 1-lb. comb, at 16@18c; dark, 12@14c; California white, 2-lb., 4@15c; extracted, 6@7c. Beeswax, 22@25c.
CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CINCINNATI, March 23.—Demand good for extracted-honey, at 6@8c; comb-honey in fair demand at 15@17c for choice, in a jobbing way. Beeswax is in good demand at 24@26c., for good to choice yellow.
C. F. MUTH & SON,
Corner Freeman & Central Aves.

CHICAGO, Mar. 23.—Demand at present not very active on comb honey. Fancy white, 17c; white, 16c; white, 2-lb. sections, 14c; buckwheat, 1-lb. sections, 12c; extracted, 7@8c. Beeswax, 28c.
S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, Mar. 21.—Fancy white 1-lb. comb, 18c; fair to good, 17c; dark 1-lb., 14@15c; 2-lb. white comb, 15@16c; 2-lb. dark, 13@14c; extracted, white, 7c; dark, 5@6c.
HAMBLIN & BEARSS, 514 Walnut St.

CHICAGO, March 23.—There is the usual Spring demand for honey, and best white continues to bring 17@18c; honey that is off in color and condition sells for 2@3c less; very little call for dark comb. Extracted, is selling at 7@8c, in cans or barrels. Beeswax, 27@28c. Now is the time to get all comb-honey on the market, as after this month hardly any is sold.
R. A. BURNETT, 161 S. Water St.

BOSTON, Mar. 21.—Honey is in fair demand; supply short. White 1-lb. comb is very scarce and wanted, at 19@20c; fair to good, 18@19c; 2-lb. sections, 16@17c. Extracted, 8@9c. No beeswax on hand.
BLAKE & RIPLEY, 57 Chatham Street.

ALBANY, N. Y., March 21.—Honey market is slow, with small stocks of comb. We quote: White comb at 15@16c; mixed, 13@14c; dark, 12@13c. Extracted, light, slow at 7@8c; dark, firm at 6c. Beeswax, 26@30c.
H. R. WRIGHT, 326-328 Broadway.

We Club the American Bee Journal and the Illustrated Home Journal, one year for $1.35. Both of these and Gleanings in Bee Culture, for one year, for $2.15.

The Convention Hand-Book is received, and I am well pleased with it. Every bee-keeper should have a copy.

CHARLES WHITE.
Farmers' Valley, Nebr., Mar. 3, 1891.

Wants or Exchanges.

Under this heading, Notices of 5 lines, or less, will be inserted at **10 cents per line,** for each insertion, when specially ordered into this Department. If over 5 lines, the additional lines will cost 20 cents each.

WANTED—Your wax to work up at lowest living prices. Please write at once to J. V. CALDWELL, Cambridge, Ills. 13A1t

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WILL EXCHANGE Foundation for Wax or cash; will also make wax into foundation when sent to me, at the lowest price in the world. Send for samples and prices to JACOB WALLERSKEIM, Kaukauna, Wis. 13A4t

---

WANTED—A man or woman who understands bee-keeping, to assist in my apiary. In replying, state experience and wages desired. If a man, he must have experience. J. B. SUMMERS, Berthoud, Larimer Co., Colo.

FOR SALE—Pure, home-made Blackberry Wine, for table or medicinal use. Warranted. Address R. E. PARCHER, Wausau, Wis. 13A3t

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WANTED—To exchange 1-lb. thin Vandervort f'd'n for 2 of wax. Samples and testimonials free. C. W. DAYTON, Clinton, Wis. 8A10t

---

WANTED—A good farmer. Write to R. E. PARCHER, Wausau, Wis. 11A2t

---

WANTED—To sell or exchange, two new 7x10 Printing Presses, with Type, etc. Would sell cheap, or exchange at a bargain, to make room for larger presses. We furnish all kinds of Rubber Printing Stamps. Catalogue free. THE MODEL STAMP WORKS, Shenandoah, Iowa. 12A2t

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DO YOU WANT TO KNOW

How to hive bees without climbing trees—to control the swarming fever—to handle your bees to secure the most honey—also, where to get the best and cheapest Hives, Supers, Comb Foundation, Honey Boxes, Bees, Queens, or anything else the bee-keeper needs? If so, address **WM. W. CARY, Colerain, Mass.**
13Dtf

Mention the American Bee Journal.

RIPEN YOUR HONEY

By my method. You will get one-third more honey, with less labor, and of a better quality than that left on the hives and ripened by the bees.

"Your plan is superb. You will reap profit by following it."—PROF. A. J. COOK.

"There is no question about your plan being the correct one to ripen honey."—G. M. DOOLITTLE.

Send 10 cents (silver wrapped) for pamphlet.

H. L. PANGBORN,
13A1t Maquoketa, Iowa.

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BEE-KEEPERS' SUPPLIES!

WE are prepared to furnish to Bee-Keepers all kinds of Supplies promptly, and at lowest rates. Correspondence solicited and estimates gladly furnished. Our goods are all made of the best material and are FIRST-CLASS in every respect. Catalogues and Price-Lists free. Reference—First Nat'l Bank, this place.

Address, **WM. McCUNE & CO.,**
43D1y STERLING, ILL.

Mention the American Bee Journal.

For Sale! 125 colonies of Bees, wintered in cellar, in **good condition.** Sale to take effect April 1st to 15th. Write for particulars.
12A3t **A. J. ACKER, Martiney, Mich.**

Mention the American Bee Journal.

BARGAINS For 1891. BARGAINS

—o—

Send for Illustrated Price-List of Dovetailed and other style Hives, Snow-white Sections, Golden-colored Italian Bees and Queens, and everything needed in an apiary.

JOHN NEBEL & SON,
HIGH HILL, - - MISSOURI.

7Dtf

Mention the American Bee Journal.

Queens Mailed Now Safe arrival guaranteed. Italians only. Tested, $2. Untested, $1; 3, $2.75. Make money orders payable at Clifton. Send for price-list. COLWICK & COLWICK, Norse, Bosque Co., Tex. 13Atf

WHEN ANSWERING THIS ADVERTISEMENT, MENTION THIS JOURNAL.

Two Weeks From receipt of order (cash with the order) Cary, Langstroth or Standard Langstroth Frame Hives, Automatic Foundation-holding frames, in the flat, $1.00; nailed and painted, $1.50. Best work and material. Any hive to order at low prices. Write me. E. A. BALDWIN, West Upton, Mass.
47Dtf

Mention the American Bee Journal

The Greatest Invention of the Age!

Bees Made to Hive Themselves When they Swarm.

Particulars free. H. ALLEY, Wenham, Mass.
9D6t

Mention the American Bee Journal.

FOUNDATION **And Sections** are my Specialties. No.1 V-groove Sections at $3.00 per thousand. Special prices to dealers. Send for free Price-list of everything needed in the Apiary.
1Dtf M. H. HUNT, Bell Branch, Mich.

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CIRCULATES
ALL OVER THE WORLD
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVII. April 2, 1891. No. 14.

Editorial Buzzings.

Mrs. L. Harrison, of Peoria, Ills., has had a tussel with *La Grippe*. If we could have some fair weather for a few days, the sun would soon drive away the terrible plague. Nearly one-fourth of all the people in Chicago are or have been afflicted with the malady. There were 150 funerals here last Sunday. Many other places are in a similar condition.

◆

The Large Manufacturers of comb-foundation, who use steam for melting the wax are, we believe, now doing very nearly like Mr. Corniel suggests on page 447. They keep the wax *very hot* for a long time, and in all probability do kill the microbes and spores. We commend this subject to their consideration, and hope they will be able to show that Mr. Corniel's fears on this subject are groundless. We would like to hear from Messrs. Dadant & Son, and A. I. Root, as to their heating methods, and the temperatures obtained in making comb-foundation in their factories.

High Side-Walls are demanded in Europe, when selecting comb-foundation ; consequently Mills are required to make such, and it is quite a compliment to America that European apiarists send here to have Mills made for them. We have just received a sample of comb-foundation with very high side-walls made on a Mill, which was recently constructed to order by Mr. A. I. Root, for an apiarist and supply-dealer in Switzerland, and is now in transit thither. We should imagine that the walls are sufficiently high to satisfy anyone—even the most exacting. The workmanship on the Mill must be first-class, for the product is simply superb. It reflects great credit upon Mr. J. T. Calvert, the manager of the Root establishment.

◆

Bees on Shares.

I wish to know the terms on which bees are kept on shares. 1. What percentage of increase and honey should the owner receive, when he furnishes the stock and fixtures? 2. Who should provide the honey or sugar when it becomes necessary to feed them?

Rochester, Minn. LEWIS HYATT.

Verbal contracts are always unsatisfactory; you should have every detail written out in duplicate, and have the documents properly signed and witnessed before doing anything with the bees. Each should have one-half of the honey and increase. Each to pay one-half of the cost of new hives, sections, foundation, etc. ; also of the honey or sugar, if it becomes necessary to feed them.

◆

Deseret, a name given by the Mormons to the Territory of Utah. The Mormons claim that in the language (Reformed Egyptian, whatever that is) of their sacred books, this word means "honey-bee."—*Johnson's General Cyclopœdia.*

◆

The Soiled Globe Bee-Veils are now all sold, and no more orders can be received for them. We have plenty of the perfect ones, and can fill orders by return mail.

Appropriation for the World's Fair.

The Bill to appropriate $5,000 for the exhibit of bees and honey at the World's Columbian Fair is now before the Illinois Legislature. It was introduced on March 25, by Hon. Joseph M. Hambaugh, and was, as usual, referred to the proper committee. The full text of the Bill reads thus:

Whereas, The large revenues derived annually from the sale of honey by the bee-keepers of Illinois make this important industry worthy of the fostering care of the General Assembly; and

Whereas, A creditable apiarian exhibit by bee-keepers of Illinois at the World's Columbian Exposition, to be held in Chicago in 1893, will call marked attention to this growing industry, and greatly assist the development of the same, and thereby add largely to the material prosperity of the State; and

Whereas, The Illinois Bee-Keepers' Association, an organization composed of leading apiarists of the State, and duly incorporated, have petitioned this General Assembly for an appropriation to defray the expenses of making an exhibit of bees, honey and apiarian supplies and appliances at the World's Columbian Exposition; therefore

Be it Enacted, That there be and is hereby appropriated to the Illinois Bee-Keepers' Association, out of any money in the treasury not otherwise appropriated, the following sums, to-wit: For payment of expenses of making an exhibit of bees, honey, apiarian supplies and appliances at the World's Columbian Exposition, the sum of $5,000, or so much thereof as may be required to make a creditable display.

Now, if every bee-keeper in Illinois has not already written to the Senator and Assemblyman of his district, let that be done at once, urging them to support the measure, and endeavor to secure the necessary appropriation for a creditable exhibition of the products of the bee, at the coming World's Fair.

* * *

A New T-Tin Machine has been invented by Mr. A. Beeson, a Colorado apiarist, which completes the product by one operation, and is said to be superior to anything now in use.

Spraying Fruit Trees while in bloom should be condemned by all rational persons. We are appealed to for the draft of a bill to be presented to the Illinois Legislature, making it a criminal offense, etc. Such a Bill is now before the Michigan Legislature. It reads thus:

The People of the State of Michigan Enact, That it shall be unlawful for any person to spray any fruit or other trees, shrubs, vines or plants, with paris green, london purple, white arsenic, or other virulent poisons, or to scatter upon such trees, shrubs, vines or plants, powdered london purple, paris green, white arsenic, or other virulent poisons, **while such trees, shrubs, vines or plants are in blossom, and so may be visited by honey-bees in quest of nectar or pollen.** And that any person who shall spray such trees, shrubs, vines or plants with london purple, paris green, white arsenic, or other virulent poisons, or shall scatter the poison upon the same while in blossom, shall be deemed guilty of a misdemeanor, and for the first offense, shall be punished by fine in any sum not less than five dollars, and for the second offense, by fine in any sum not less than twenty-five dollars, and in default of payment of the same, by imprisonment in the county jail not more than ninety days.

The following from Prof. Cook we commend to the attention of Michigan fruit growers:

There is a bill before the Senate of the Michigan Legislature about spraying fruit trees while they are in blossom. If enacted, it makes such practice a misdemeanor. There is some opposition. It comes on the ground of prospective injury to fruit men. Yet our State Horticultural Society, and the Grand River Valley Horticultural Society, have both unanimously passed resolutions, urging the passage of the bill. Senator Taylor informs me that if fruit men will write to their Senators, favoring the passage of the bill, it will do much good. I would urge all Michigan fruit men to do this. The petitions should come from fruit men rather than bee-men. Each person might petition his own Senator, and the Legislature in general. The last could be sent to Senator R. L. Taylor, Lansing, Mich.

A. J. Cook.

A similar bill should be presented to the Legislature in every State.

Bee-Culture in California.

The following article is from the pen of Ninetta Eames, and was written for the *Overland Monthly*, "the Representative Magazine of the Pacific Coast," an advertisement of which may be found on another page. The engravings are used by courtesy of the publishers of the *Overland*. These must have made quite plain to its readers many interesting things about the honey-product of that "land of sunshine and flowers."

Over forty years ago, in a statement made to Congress of his investigations on the Pacific Coast, Gen. Fremont expressed the belief that the honey-bee could not exist west of the Sierra Nevadas. This renowned explorer but shared a prevalent opinion, based on the climatic conditions of a country whose rainless Summers seemed to imply a universal absence of the flora essential to insects of the *Mellifera* order.

As late as the year 1865, an able writer on California's resources, unhesitatingly declared: "A farmer in this State who would successfully keep bees, must cultivate such plants as will bloom in the long, dry Summers. The hives should be set near a river or moist lowland. In the wide valleys, and on the mountains, many bees perish after the first months of Spring, unless allowed all the honey they have previously gathered."

In conformity with such erroneous impressions, the first extensive apiaries of the coast were established along the Sacramento River. This precinct is still prolific of honey, as statistics show that in 1887 there were shipped by rail from the city of Sacramento upwards of 100,000 pounds, nearly half of which found an Eastern market.

To-day, however, the typical bee-ranch of California occupies the high, gravelly ground of her foothills. At all seasons these elevations are bristling and fragrant with chaparral, or smoothed into velvety softness by lapping mats of clover and alfilerilla. This vegetation furnishes almost inexhaustible forage for bees. In fact, no month, in these sections, is wholly devoid of honey-producing plants. Here one is sure to run across Lilliputian cities of hives, dotting sagey slopes, or scattered about the grateful shade of canyons, which open their arms to the opulent plains below.

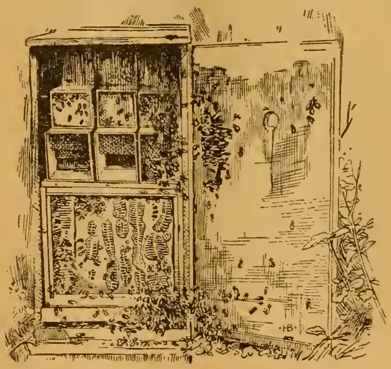
TWIN-OAKS APIARY, LOS ANGELES.—PHOTOGRAPHED BY BUTTERFIELD.

In March, 1853, the first bees were brought to California. A traveler crossing the Isthmus on his way to this State, purchased 12 colonies at Aspinwall, and landed them safely in San Francisco. During the ensuing Winter, the colonies dwindled to one, which was removed to San Jose in the Spring. Here, in the valley of Santa Clara, with its prodigal provision of honey-hearted blossoms, the bees thrived and multiplied rapidly. Colonies sold for $100 each, and honey at wholesale from $2 to $4 per pound.

Spurred by these phenomenal prices, an enterprising neighbor immediately took steps to secure the importation of twenty more colonies, and two years later the "Pioneer Apiary of California" numbered 72 colonies. All of these were of the common variety known as the German or black bee, which, after all, is not black, but quite gray. The entire State, and the adjacent territories were stocked with bees from this apiary.

About this time a prominent Pennsylvania apiarist, who has since invented the Harbison hive, sailed from New York in the Northern Light, with 67 colonies of bees snugly packed in the vessel's hold. These were eventually located near Sacramento, where their thrift and fertility exceeded the most sanguine expectations of the gratified experimentalist.

For the next 15 or 20 years, apiculture went hand-in-hand with agriculture. Small farmers all over the State almost invariably owned a few colonies that paid well, notwithstanding desultory attention, and a common ignorance of their requirements. But of late years, the "bee business" has attained the dignity of an exclusive interest and investment. Not only is it a means of livelihood to hundreds of families, but in not a few cases it is a source of actual wealth. No other industry yields so large a profit for the outlay of capital. A colony of bees in the Winter costs all the way from one to three dollars. They begin swarming about the first of April.


THE HARBISON HIVE.

Experience proved that bees were in no danger of starving in this climate, so long as they haunted the alternate flowers of mountain and *mesa*. Those localities are seldom nectarless, even in the dryest of Summers. It takes but a modicum of moisture to bring a riotous crop of bloom on the alfilerilla, sage, sumac, buckwheat, hoarhound, flax, golden-rod, and *yerba santa*, on which the little creatures work with an abandon of enjoyment.

California's hilly regions are the Palestine of the New World. Most of their present harvesting is done by myriads of blissful bees; but the time is not far distant when their infinite possibilities will command broader service than can be compassed by these marvelous insects. Already the thrifty stems and vines of the orchardist are beginning to climb up from the cultivated hills of the valleys, disputing with the apiarist the wholesale possession of these vast territories. As yet, however, the pressure upon the latter is hardly felt, and not worth a moment's anxious thought to him.

He knows the State covers an area of 158,360 square miles, and has only one valley, its great central dip, which measures at its widest point but little more than half a hundred miles from hill to hill. The colossal mountains running the length and breadth of the Coast, have their correlative depressions of valleys, steppes, and plains, but form, nevertheless, innumerable broken surfaces of uplands, with picturesque divisions and subdivisions of ridges, all offering the essential requisites for bee-culture.

The atmosphere of South California has the same delightful quality so enthusiastically extolled by Judean travelers. It is due in part to a warm current in the ocean near the coast line, and the contiguity of the Mojave and Colorado deserts, whose fiery furnaces dry the moisture from the winds ere they are fanned back, warmed and purified. Then, again, a marked climatic effect is produced from the singular conformation of the mountain ranges that in a measure separate the southern portion of the State from the rest of the continent. They are mightier than Lebanon's, and are prodigious points of reflection and convergence of the sun's rays.

The Italian bee has fast superseded the German black variety in California, and is now the most universally esteemed. It is supposed to be the "variegated golden bee," of which Virgil sang a century before Christ. It is worthy of such honor, being a beautiful insect, with three golden girdles about the polished satin of its jacket. The Italian bee is a native of the province north of the Gulf of Genoa, and in Europe is known as the Ligurian bee. It is hardier and more amiable than the black bee, besides having the immense advantage of being a better defender of the hive. In every instance a strong Italian colony is able to overcome its most redoubtable enemy, the moth. At one time in this State, Italian queen bees brought $100 each. They are shipped through the mails in wooden cages covered with wire-cloth. Eight or ten workers always accompany the queen in transportation, to insure her warmth and companionship. In 1878 the Syrian and Carniolan bees were first introduced into California by prominent apiarists, and are recently growing in favor. Eminent authorities in Europe and America declare the Carniolan to be undoubtedly the bee of the future, but in this climate the Syrian and Italian give more uniform satisfaction.

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THE BEE-RANCHER'S HOME.

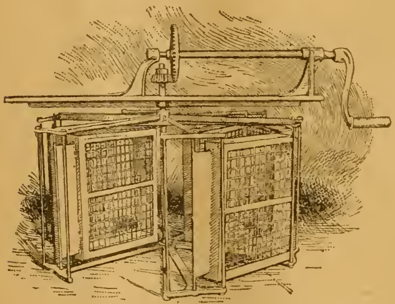
Here, as elsewhere, the Langstroth hive, variously modified, is a general favorite, though on many ranches it is being superseded by the Harbison. The latter has a door that opens like that of a cupboard. This is often made of glass, through which the bees can be seen at their divers labors. The upper chamber is reserved for the sections of comb honey, and the lower for the brood. It is a curious and fascinating spectacle—this interior of a bee-hive.

The wax-makers are astonishing little gymnasts. They cling together in a series of intersecting chains that form a sort of curtain, which is motionless except for the fluctuations imparted to it by the exertions of the inside layers. While officious comrades assist the pollen-bearers to unload their golden pellets, the latter slowly fan themselves with their gauzy wing; the wax-bringers, wagging their bodies from side to side, run to and fro in their efforts to dislodge the scaly particles on their abdomens; honey-carriers deposit their burdens in newly-made cells; zealous workers remove the offal and litter, and one and all rudely shuffle unsophisticated young bees, or tease and bite the lumbering drones, which seem to be in everyone's way.

The "frames" used for comb-honey are constructed of the soft white timber of basswood and poplar. As neither of these trees belongs to California, apiarists send East for their frames. When filled and capped the sections are glassed, and fitted into strong shipping crates, ready for transfer by land or sea. One of Ventura's apiarists not only sees to the packing of his tons of honey in the cars, but afterwards boards the train and personally superintends their transportation to an Eastern market.

In all extensive apiaries, machines are used to simplify certain processes connected with the business. Of these the most important is the extractor. This happy invention is based on the principle of centrifugal force, and was suggested to Herr von Hruschka, of Germany, by witnessing the honey thrown from a piece of comb which his little son was swinging from the end of a string.

The reversible extractor consists of a large tank of galvanized iron, in which is hung a wire frame-work made up of four baskets. In these the comb is placed, after it is first uncapped by one or two dextrous strokes of the honey-knife. By means of a crank the baskets are then set in motion, and their rapid revolutions cause the honey to fly out into the tank. The combs are reversed, and the other side emptied in like manner before returning them to the hives.



THE EXTRACTOR BASKETS.

If the forage is abundant, the combs will be refilled and capped in six or eight days, when the extracting process is repeated. A careful hand can gauge the machine so as to eject the nectar without injuring the larvæ, should the comb have both brood and honey.

The extracted-honey in the tank is usually drawn off into 60-pound tin cans, which are shipped in the cases. Shrewder apiarists adopt showily labeled glass jars and jelly-cups, through which the transparent contents are displayed to great advantage. It is the purest of all sweets, and the majority of California bee-men do not buy a pound of sugar throughout the year.

Everyone knows that honey comb is indigestible and innutritious; yet so inviting is its appearance, that it is no easy matter to create a like appreciation of the extracted article, though it be equal in color and flavor. Unfortunately there still exists a reasonable prejudice against the old-fashioned "strained" honey, which reflects more or less discredit on the extracted, which is now put upon the market.

San Diego, whose drouth is the problem of agriculturists, is admitted to be the very paradise of the honey-bee. The pioneer apiarist here owns 6,000 colonies of the best imported varieties. His numerous ranches are scattered throughout the county, each numbering from 200 to 300 colonies. Unless urged by hunger, the usual range of a bee is two miles, so it is poor economy to crowd too many colonies within that radius.

In 1884, there were shipped from this port 1,000,000 pounds of honey, one-half of which was in the comb, and 55,000 pounds of wax. No account was made of home consumption, which would have added thousands of pounds to the above figures.

San Bernardino's honey product the past year was nearly 400,000 pounds; while Los Angeles county sent out 1,037,000 pounds, and Ventura upwards of 520,000 pounds the same season. In 1884, an exceptionally good year, the honey export from this State reached as high as 9,000,000 pounds.

The entire amount of California honey furnished home and foreign markets in 1887, was 4,647,000 pounds. The shipments by sea direct were 3,700 crates to England, 600 to France, and an aggregate of 1,300 crates forwarded to Australia, China, Hawaiian Islands, and British Columbia. Two thousand more crates, destined for the European market, went overland to New York and New Orleans. The total honey product marketed here in 1889, was nearly 4,000,000 pounds.

Most of this is gathered from different species of sage, that tuft the hills often to their steepest summits, and extend far down the slopes into the valleys. This sage honey is as delicious as that taken from the wild thyme of Hymettus and Galloway, or the nectar from the rosemary of Narbonne; and more translucent than the clover honey of Cumberland and Lancaster, and more finely flavored than the celebrated honey of Atacama.

During a favorable season, bees in California will average 200 pounds of honey to a colony, but 75 pounds is considered a profitable yield. A Los Angeles apiarist, in one year, took 1,000 pounds of extracted-honey from a single Italian colony. If the day be propitious, a colony will gather from 10 to 12 pounds of honey. There was an active demand for California honey last season, owing to the failure of the Eastern crop. The wholesale price per pound varies from 10 to 12 cents for that in the comb, and 5 to 6 cents for the best extracted. In Wartham Canyon, near Fresno, the owner of a large apiary gathered 80 tons of honey in one Summer. Half of this he extracted and put up in 5 and 10 pound cans, before sending it to New Mexico and the territories.

A LILLIPUTIAN CITY NEAR SANTA BARBARA.—PHOTOGRAPHED BY WATKINS.

From early Spring until far in Autumn the country in this vicinity is an endless garden plat, whose nectar-laden blooms rapidly succeed each other in unnumbered diversities of form and hue.

Besides wild pastures of sage, buckwheat, rhubard, honeysuckle, and ceanothus, there are grown acres of that admirable forage plant lucern, familiarly known by its Spanish name of alfalfa. Its purple heads arouse a passion of acquisitiveness in the bees. They crowd upon them in advance of the sun, and not till latest twilight do the tireless wanderers reluctantly drag their burden of sweets homeward.

Since the general introduction of alfalfa into Colorudo, the honey industry there has become conspicuously profitable. California bee-men, particularly those on bottom-lands, have taken a hint therefrom, and cultivated fields of lucern near their apiaries. It renews its blossoms after every re-current cutting of the stalks, thus providing a continuous feast for the bees. No caprice of the season can rob them of the crystalline globule hid in each tiny chalice. They dip into it with an eager, confident air delightful to their master, who looks on with a deep serenity; such active contentment augurs a bountiful increase of stores, and the future hides her face in roseate draperies.

The strip of country along the Sierras lying within the eastern boundaries of the State, has excellent bee-pastures, with an altitude of 5,000 feet above the sea level. Snow sometimes falls here to a depth of 10 or 15 feet, but Spring usually opens out with almost tropical warmth and brilliancy. Then the bees search the mountain swales for the downy catkins of the willow, the sunny exposures for the delicate pea-flowers of the cercis, and the dry shelves of the steeps where the red arms of the manzanita swing their pendulous pink cups.

Later on they visit the sandy levels, where dwarf phlox flames the June days through; while in July and August every busy worker devotes itself to the Alpine sage, which thrusts its golden spikes from bramble brake and gorge. Each of its diminutive blooms is a microscopic laboratory for evolving and perfecting nectar.

Among the congregated redwoods up the savage defiles of northern Sonoma and Mendocino, and higher still in the remotest trenches of giant peaks that skirt the sea surge, the rose-bay, or *rhododendron maximum*, spreads a regal panoply of blossoms over moss-patched rocks and shadowed dingles of mountain streams. These rosy, wide-mouthed bells, spiced with a nameless fragrance, hold in their freckled throats a poisonous sweet that bees will sometimes gather.

An old bee-hunter in these heights observed that his bees waited longer than was their custom before capping combs filled from this handsomest of California's laurels. By this he inferred that the wise little chemists intended the dangerous essence to evaporate from the honey before they sealed it for future use.

In the dry year of 1877, while camping under the majestic Druid oaks on the upper Simi, we found in the springless ravines, fresh heaps of dead bees strewing the faded earth. For weary days they had traversed miles with a speed that exceeds that of the fleetest horse. The frayed gauze of each fragile wing bore eloquent testimony to the stupendous effort they had made before succumbing to hunger and exhaustion. By some extraordinary good luck; one stiffened little creature had succeeded in filling its honey-pouch ere it fell by the wayside. This pea-like receptacle was already pierced by an enormous ant, whose knotted body visibly expanded while he voraciously dipped into the contents with his spoon-like ligula.

"Twin Oaks," so called from the actual union of the trunks of two sturdy young oaks, is in a picturesque canyon of the foot-hills that sink their varying undulations in the broad, free sweep of the San Fernando plains.

Just out from the apricot and fig orchards circling the pleasant little city, the road makes a straight line to the magnificent mountains that prop the eastern horizon. All up the gradual ascent, under the dazzling mantle of the morning sun, there were billowy leagues on leagues of wild blooms, shading into every conceivable tint of orange, vermilion, and purple dies. Much of this radiant esplanade has a bewildering strangeness to the eye, though now and then a familiar shrub or flower brought its glad surprise.

The solitude of this ravishing bee-pasture was unbroken, save by trill of bird throats and the rythmic hum of insects darting and floating about like live jewels. The all-pervading sunshine under the fleckless sky, the caress of wooing winds stirring the silken flowerets into a thousand sweet perfumes, the sublime uprising of the farther mountains, all gave a vivid joyance to the mind. Countless bees swept the hollows of the nectariums with their tiny proboscides, then hurried away with their precious loads. The little creatures were discriminating in their fancy, often passing the gaudiest and most odoriferous blooms, to settle on a simple flax flower or white mignonette.

At intervals, far down the slopes and up the pinnacled hills, the yucca reared its gigantic snowy plume. This wonderful liliaceous plant is often 20 feet high, a shaft of waxy blossoms, redolent as tuberoses, and of a like dead whiteness. The yucca is sparing of nectar, but notwithstanding, is not wholly valueless to the bee-man. From the fibrous leaves growing close to the ground around its flower stem, he makes a soft brush, leaving a piece of the stalk for the handle. With this novel whisk, which is almost indestructable, he sweeps the bees off the combs that are to go into the extractor.

In June the luxuriant coloring of tropical Spring is merging into the more subdued tints of first Summer. In the browning clover there was yet an occasional eschscholtzia—the *copa de oro* of the Spanish—burning like a miniature fallen sun. It is the most conspicuous of all California's wild flowers. Hardly a month before, whole meads and uplands were ablaze with its splendid orange, which gave an almost painful brilliance to a noonday landscape. If one walks among these

"Poppy-plains keeping
Such dream breath and blee,"

soon after day-dawn, he sees the folded flowers trooped about like fairy knights in gray-green suits, with golden visors just visible under their high-peaked, martial caps. These they wear "tip-titled," ready to be doffed at the first approach of their great commander, the Sun. There is a consciousness of daring impropriety in slipping off this soldierly chapeau one's self, that is both captivating and repellent; man's egotism makes his alteration or precipitancy of Nature's order a keen delight to him, even though a diviner instinct cries out against the profanation.

The canyon of "Twin Oaks" is not one of those jagged, sharp-toothed gashes that lay bare to the valley all the bleak desolation wrought by some ancient cloud-burst, but so gentle a division of the great, hushed hills that not one rib or scar stands revealed. From base to lower crowns the mountains here are rounded, padded, and carpeted by furzy sage and chaparral, with here and there a glimpse of cool ravines, in which are dark green oaks and silvery-columned sycamores.

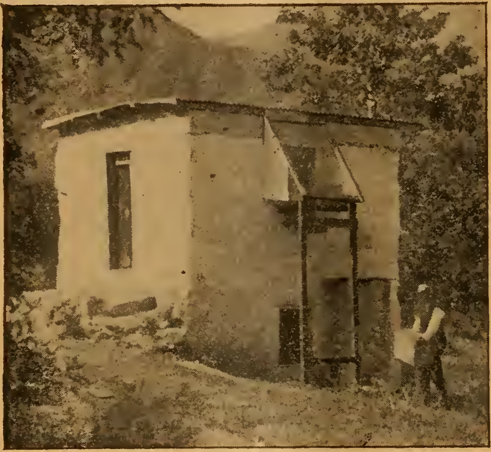
Beyond a grove of steepled eucalypti, set here for bees to forage in the Winter, a charming wooded pass winds up through blossoming olives, and nectarine, peach and apple trees, bearing their green burdens of fruit. Behind a hedge of willow, a mountain stream plays a rollicking tune on the polished white stones of its bed. On its brink, long, yellow-tubed flowers were wet with the spray of its mimic waterfalls. All up the creek and over it, high swinging curtains of wild clematis and honey-suckle dropped their loosened petals on sparkling pools and banks of fringed filices. Flame-plumaged birds dived in and out of the branches, caroling vociferously above the petulant peep of their nestlings. On every hillside a galaxy of golden tulips pressed through the tasseled grasses.

To the right of the road a rude dwelling was half buried in rank vegetation. Beside it stood the "Twin Oaks" and their brother trees, under which were several hundred hives, all boiling over with zealous workers.

The honey-house at Twin Oaks is set among the thickets of laurel and sumac, whose buds were reddening toward adolescence. Inside the building were stacks of framed honey comb against the rough plaster of the wall, and jars of extracted-honey so clear that ordinary print could be easily read through them. All the work of extracting, canning, and the making of foundation, is done in this clean apartment. The room is usually kept darkened, and at a temperature of 85 or 90°, so as to hasten the process of ripening the honey.

A Bee-Keepers' Association has recently been started at Los Angeles for the mutual benefit of bee-masters throughout the southern counties. Its members aim to bring about better prices, to enforce proper gradations as to quality before marketing, to open up new markets, etc.

It is suggested by this enthusiastic body that the State University be given its Professor of Apiculture, who shall devote his time to experiment and instruction in the delightful and profitable study of the rearing of bees. Long ago the State of Michigan took this course at her Universty, and to-day she reaps a rich annuity from her Apicultural Department, though she lacks the territory of perpetual bloom existing in California.



STONE HONEY-HOUSE.

Coming out of the canyon we found the sun had set. Already the great valley was twilight-cast, and a dissolving warmth and balm flooded the atmosphere. Far off, a low sea-line of mountains were dimly traced on the crimson screen of the western sky. Nearer, the massive heads of the Santa Susanna ridge were pillowed on pink, woolly cushions of clouds, and San Fernando's venerable peaks had donned nightcaps of fog.

The flocks of meadow larks skimming the openings chorused their rich soprano, quails scudded and chattered in the underbrush, a mocking-bird chanted a plaintive note from a sheltering elderberry bush, and down the road, his crest erect, and long tail hoisted sail-wise, a tall chaparral cock raced on before with incredible swiftness.

On the last drowsy poppy by the way a belated bee, heavily swathed with pollen, fell a victim to the murderous beak of a king-bird. This was but one of the mournful tragedies of a bee-pasture, for with the bee as with man, Death often lurks among the flowers of life.—Ninetta Eames, in the *Overland Monthly*.

Queries and Replies.

Purity of Italian Drones.

Query 759.—Will queens reared from pure Italians, and mated with black drones, produce pure Italian drones? —Mc.

Yes.—M. Mahin.

Yes.—H. D. Cutting.

Yes.—Eugene Secor.

Yes.—Dadant & Son.

Yes.—Mrs. L. Harrison.

I say, yes.—James Heddon.

Practically, yes.—C. C. Miller.

Comparatively, but not absolutely, pure.—A. B. Mason.

Some writers say not. I believe, however, that they do.—J. M. Hambaugh.

Those best qualified to judge say that the drones will be pure.—R. L. Taylor.

Theoretically they do; but the practice and the theory do not agree.—G. L. Tinker.

They will not; as can be readily ascertained by mating such drones and pure Italian queens.—C. H. Dibbern.

The question has been debated. According to the law of parthenogenesis, the drones would be pure Italians.—J. P. H. Brown.

Enough so for all practical purposes in an apiary worked for honey; but not absolutely pure, according to my way of thinking.—G. M. Doolittle.

It is claimed they will, but I am one of the doubters. There is not room in this column to give my reasons, but they will be found in back numbers of the bee-periodicals.—J. E. Pond.

According to the best entomological deductions, a pure blooded queen should produce pure males of her own race, no matter what her mating might be. But during my long experience as a bee-student and queen-breeder, I have observed some things that leads me to believe that the mating of a pure queen does effect her male progeny, which will show in a practical way whether we can understand it or not.—G. W. Demaree.

According to the theory of parthenogenesis, a pure queen will produce pure drones, no matter what her mating may have been. There are some who dispute this, however, and they give good reasons for their position.—The Editor.

Deep or Shallow Frames.

Query 760.—What are the main advantages of the Simplicity frame over one of square build, like the American or Adair? My own inclination is towards the latter, since the queen lays in a circle, and also in wintering, a brood-chamber 12x13x12 inches would give some 7 cubic inches less to keep warm than one 18x12x10 inches. I winter my bees on the summer stands.—Va.

I prefer a shallow frame.—M. Mahin.

I prefer a large surface on which to put supers, and I like to be in the fashion.—C. C. Miller.

Ask Father Langstroth, A. I. Root, or some hive maker, for "I don't know." —Mrs. L. Harrison.

No advantage unless more use them. I prefer Langstroth frames, because more use them, else I like square frames the best.—A. J. Cook.

For the South, a frame embracing a parallelogram, like the Langstroth, is the best shape. But I have used closed-end frames since 1871.—J. P. H. Brown.

It now seems pretty well established that a two-story hive of shallow frames, 7 or 8 inches deep, is safer in out-door wintering than any deep frame.—G. L. Tinker.

They are more easily taken out and put in the hive, less liable to break down in hot weather, or in moving, and the brood is nearer the surplus receptacles. —J. M. Hambaugh.

Various methods of management require different styles of frames. While many prefer the Simplicity, others would not use it, and are successful with the deep frame.—H. D. Cutting.

Your queens do not always do what is best. Death and failure are as natural as life and success, and just as commonly met with. The shallow frame most conserves the warmth of the colony in Winter.—James Heddon.

In Spring, queens do not lay in a circle on account of the cold of the lower part of the comb; in Winter, the provisions in the square comb being at the upper part of the comb, the heat is lost in warming it.—CHAS. DADANT.

This matter is largely an individual question, but the fact that the great majority use the shallow frame, is a strong argument for it. This column cannot afford space for reasons why I prefer the shallow frame.—J. E. POND.

I claim that the Simplicity frame, on the whole, has no advantage over the square form of frame. For this reason I use and recommend the Gallup form of the Langstroth frame. The Simplicity frame is only that in name.—G. M. DOOLITTLE.

The Simplicity frames, being shallower, present a larger space on top for the placing of sections, and, being longer, the bees can increase the brood-nest by going along them instead of over them. An article would be required to explain fully.—R. L. TAYLOR.

They give more top room for section honey. In other words, a shallow hive is better to get the bees to store in supers, as they do not have so much capped honey to run over to reach them. The queen laying in a circle is all right, but she will lay just as readily in a very much flattened circle. If the bees are properly prepared, I do not think the shape of hive makes much difference about wintering.—C. H. DIBBERN.

I might answer your question by citing the fact that after volumes have been written on this subject, the Langstroth form of frame—that is longer than deep—has steadily gained in popularity, and the facts show that it is in more common use at this time than all other forms of frames put together. Such a general preference for a frame longer than it is deep, ought to count something in their favor. We do not make hives to winter bees alone—we want a hive that is adapted to honey production. Your climate is much the same as mine, and a practical test will convince you that your "inclination" is in the wrong direction. In a warm climate (and anywhere, in fact), we want a large surface at the top of the brood-nest for the surplus cases.—G. W. DEMAREE.

The "Simplicity" hive takes a Langstroth frame, and that style of frame is preferred because it gives more surface for supers, when comb-honey is desired; and, being shallower than the Adair, Gallup or American frames, it induces the bees to enter the supers earlier.—THE EDITOR.

Topics of Interest.

Foul-Brood Spread by Comb-Foundation.

S. CORNIEL.

The opinion is held by prominent bee-keepers, both in Europe and America, that the contagion of foul-brood may be communicated by the use of comb-foundation made from the wax of infected colonies. Instances are given in which the reasons for believing that the disease was conveyed by this means seem very strong. Other bee-keepers, equally prominent, believe that the degree of heat necessary for rendering the wax, and for manufacturing foundation, is sufficient to remove any taint of disease it might contain.

The facts required to settle this question have not yet, so far as I can learn, been determined. They are: First, the lowest degree of heat which will in-invariably kill the spores of bacillus alvei when in the most resistant condition; and, second, the highest temperature to which wax is invariably raised in the processes of rendering combs and making foundation.

In the absence of information regarding these matters, we may use facts which have been determined as to the death points of other microbes, to assist us in avoiding live germs in the brood-cells built on foundation furnished to our bees.

Before proceeding further, let it be kept in mind that the seeds of some vegetables are killed by a momentary exposure to the temperature of boiling water, while others will withstand it for hours. The germs of the air vary as much, among themselves, as the seeds of the botanist. In a dry, ripe state, both seeds and germs resist extreme temperatures better than when normally saturated.

Let it be borne in mind, too, that there is the same sort of difference between the fully-developed microbe and its spores, or germs, that there is between the fully-matured vegetable and the tiny seed from which it grew: also, that the death point of microbes is the maximum temperature at which they can live, or the minimum temperature at which they cease to live. It is settled that the death point of the least resistant fully-matured microbes, is 104°.

It has been proven that germs, as compared with the fully-matured microbes, possess a power of resistance to heat in the proportion of 11 to 6. Therefore, as 6 is to 11, so is 104° to 191°, which is the minimum death point of spores. We had better stick a pin just here, because, unless it can be shown that the spores of foul-brood are more sensitive to heat than any others hitherto examined, they are certainly not killed by a temperature lower than 191°.

It has been ascertained that the death point of the most resistant fully-matured microbe is 140°. Bearing in mind the above ratio, the death point of the most resistant spores is 257°. Pasteur found, in practice, that this temperature was required to kill spores in a dry state. We may infer, then, that so far as investigations have gone, the range of temperature for the death point of spores is 66°—that is to say, from 191° to 257°.

Wax melts at a little lower than 145°. When it is rendered in the solar wax extractor, it is probably not heated above 160°. In sheeting it for foundation, the wax is melted, and kept at a temperature as near the congealing point as possible. There is good reason for believing that foundation is sent out which has never been heated up to 190°, much less 257°. It is highly probable that such foundation would contain live germs of foul-brood, if made from the wax of foul-brood combs. Since it is not known that the death point of the germs is lower than 257°, and since it is certain that no manufacturer heats the wax up to this degree, it is possible that all foundation made from infected wax may contain live germs of foul-brood.

In arriving at this conclusion, I have considered what may be said in favor of sterilizing the wax by the process of rendering the combs in boiling water. The advantages of Tyndal's method of destroying obdurate germs by the process of discontinuous boiling, will not apply here, because that process requires that at some point in the operation, the germs shall be brought into contact with the water, and become saturated with it. Germs coated with wax could not meet these requirements.

Since, as has been shown, there is no certainty that foul-brood germs are killed by any temperature lower than 257°, and since this degree of heat cannot conveniently be applied to wax—and if it could, would probably injure it—the question arises, how shall we avoid the danger of starting the disease in our hives, and continue to use foundation purchased from others?

Fortunately, facts have been ascertained with respect to killing the spores of other microbes, which, I think, may help us out in this case. It has been ascertained that a long exposure to a lower temperature produced the same effect as an exposure to a higher temperature for a shorter time. "For example, speaking roughly, an exposure of an hour and a half to a temperature of 212° appeared to be equivalent to an exposure of 15 minutes at 228°."

What I would suggest is that the manufacturers of foundation place their wax in a wooden tank within a tank, the space between the two to be filled with water which shall be kept heated up to 200° for several days, in order to roast to death any spores the wax may contain.

A cubic foot of wax weighs about 60 pounds. A tank 3 feet wide, 4 feet deep, and 6 feet in length, would hold 2 tons, a quantity probably sufficient for a single batch of foundation anywhere. Manufacturers who use steam could adopt this method without much trouble. The expense of keeping up steam would be the chief addition to the cost.

That there is danger in the use of foundation, such as is now placed on the market, I firmly believe. That the above method, if faithfully carried out, will sterilize the wax, there can be little doubt. Whether it is the only method, or the best one, time will show. When bee-keepers pay over their good, clean cash, they should insist that the foundation they receive shall not be the means of starting disease in their apiaries. If the danger were fully realized, and generally known, the manufacturers of foundation would be obliged to adopt some method for sterilizing their wax, which would be infallible.

Lindsay, Ont.

Ohio State Bee-Keepers' Convention.

MISS DEMA BENNETT.

SECOND DAY—FEB. 11.

The first subject on the programme for the day was "Queen-Rearing," by Dr. L. G. Tinker, but as he was not present his essay was read by W. Z. Hutchinson, when a general discussion was had by the members.

J. B. Hains—I do not agree with the essay about the second lot of cells. I think the second lot better than the first.

W. Z. Hutchinson—I agree with Mr. Hains. The second lot is better, the third inferior, and the fourth—no good. I think the cutting of combs is as well where there are plenty of eggs.

J. B. Hains—If there are only a few eggs in a hive—in many cases the eggs are taken out—is it not probable that eggs are used to help prepare royal jelly? We find, in a hive that has cast a swarm, plenty of brood in all stages. I prefer to raise queens from a vigorous queen, rather than to have one shut up in a cage, and I object to tobacco.

E. E. Hasty—There are five of us who were on committee, and the President besides, in the committee room, when the landlord came in and passed around the cigars, but no one took any, as they all replied that they did not smoke. In regard to the eggs, if the bees use them in any way for royal jelly, they must eat them to help secrete the jelly. We do not know the exact relation of royal jelly and the food that is fed to the larvæ. If you stop feeding larvæ, and still give them eggs enough to feed queen-larvæ, it might be well.

E. R. Root—I do not want tobacco unless to prevent robbing—chloroform will do the same.

"Has any one present had any experience in hatching queens above a queen-excluding honey-board?"

W. Z. Hutchinson—I have started them, but never left them to mature.

E. R Root—It will work, but our man thinks it too much trouble.

J. F. Moore—I tried it, by having cells above and below at the same time, and it worked very well.

W. Z. Hutchinson—I can see some advantages in raising a queen above the honey-board—you can utilize more heat, and in the Fall you can unite them better. Mr. Alley starts cells in one colony and transfers them.

Mr. Edmonston—I use the Alley method. I have often had every cell started, and think that sometimes all were hatched. Sometimes the eggs will be missing. Set rules do not always work.

Mr. Hutchinson—I have had queen cells lay out-of-doors two days, and hatch.

Mr. Edmonston—One time I had a queen cell lay on the sitting-room window for several days, when my little girl brought it to me saying, "Oh, pa! There is something alive in this peanut," when I saw, to my surprise, that it was a cell with a queen in it just gnawing out.

J. B. Hains then read a short essay on "Spacing of Frames."

E. R. Root—I think ⅜ of an inch is too close.

Dr. Mason—One and one-quarter inches, from center to center, is right.

E. E. Hasty—I think if too close spacing is used, that you crowd the bees out to loafing in the porch.

W. Z. Hutchinson—If there is no work, I had just as soon they would loaf about the porch as in the sitting-room.

Dr. Mason—If the frames are close, they will go above to put honey.

F. A. Eaton—If too close to let the air circulate above the brood, the bees will go out to give the brood air, so as to keep it from smothering.

W. Z. Hutchinson—If the brood will smother, how will it be when the bees all go in of a cool night—what then?

"Will close spacing prevent drone-rearing?"

E. R. Root—I think that close spacing discourages drone-rearing.

Mr. Bleesch—I have found that smoking the bees several times causes them to go into the supers, to remain and go to work.

W. Z. Hutchinson—I can see no object in driving them in, when there is no honey coming in.

F. A. Eaton—I think there is a point there; would they not fill themselves with honey, and go up and go to building?

D. R. Morris—One and one-quarter inches, from center to center, is right. I never had trouble to get them to work in the supers?

The secretary then read letters from E. M. Bennett, of South Charleston; and Henry Beatty, of Massilon, O., requesting to be admitted as members of this Association, which request was granted by unanimous vote. Letters were also read from H. F. Moore and J. S. Barb, enclosing dues.

On motion of E. R. Root, W. Z. Hutchinson was made an honorary member of this Association.

Cincinnati was decided upon as the next place of meeting, the time to be decided upon by the Executive Committee.

The election of officers then took place, with the following result:

Charles F. Muth, of Cincinnati, President.

Miss Dema Bennett, of Bedford, Vice-President.

S. R. Morris, of Bloomingsburgh, Secretary and Treasurer.

The committee on the Columbian Fair, reported as follows:

"Your committee, appointed to consider the subject of the Ohio Bee-Keepers' share in the Columbian Fair, have unanimously agreed to recommend to this society the adoption of the plan proposed by our worthy President, in his address of yesterday. The plan was presented, and explained by him, at the Michigan State Bee-Keeper's Convention, at Detroit, a few weeks ago, and adopted by that convention, and it is not necessary to repeat it here. We recommend that an appropriation of $2,500 be asked of the Legislature, with which to defray the expenses of an exhibit, which shall be worthy of the Buckeye State, and compare favorably with our neighbors.

"As to the matter of a committee to take charge of the collection, and the arrangement of the exhibit, your committee agree that one person is preferable to more than that, and if that one person needs assistance let him choose his help, subject to his instructions. For this committee we would recommend as our first choice, Dr. Mason, because he has a reputation in this line, and would do our State credit.

"He has been recommended for General Superintendent of the Bee Department of the entire Fair; and if he has this position, it may be out of the question for him to act as State Superintendent.

"In case the expected engagement of Dr. Mason should be consummated, we recommend as State Superintendent, in charge of the collection and arrangement of our exhibit, under advisement of Dr. Mason, Miss Dema Bennett. She has been recommended for this position by the Progressive Bee-Keepers' Association, located in Northeastern Ohio, and has been our efficient Secretary and Treasurer for the past two years.

"J. T. CALVERT, *Chairman.*"

J. T. Calvert then read a very interesting essay on "Freight classification for bee-keepers." He also gave answers to questions on the subject, which showed how well he was acquainted with the matter in hand.

"The advantages of using foundation," were given in an essay by W. Z. Hutchinson.

E. E. Hasty—In these late years, bee-keepers have not got their money back on foundation.

J. B. Hains—I have not, on that or anything else. I bought it when it was $1.50 per pound, and as long as I keep bees I shall use foundation. I will do what is right by the bees, and if I do not get returns, it will not be my fault.

S. R. Morris—I have used full sheets for several years, to decided advantage. This season I have received $5 for every $1 invested, by actual itemized account.

F. A. Eaton—I have made it pay, and my book will show it. I use full sheets in sections.

Mr. Bleesch—In case you put in full sheets, and honey is coming in slow, do not the bees eat it?

F. A. Eaton—Not unless it is put in too late.

E. E. Hasty—If you are having from 6 to 12 pounds per day, I say use full sheets; but if only 2 or 3 pounds, it does not pay.

W. Z. Hutchinson—I understand this about as Brother Hasty; I think we can use foundation to enormous advantage by using full sheets, when honey is coming in plentifully.

Mr. Harris—I think half a sheet of foundation pays best.

W. Z. Hutchinson—If half a sheet pays, why will not a full sheet pay petter?

(*To be continued.*)

Poplar Trees and Honey—Foul-Brood.

WM. S. BARCLAY.

An inquiry arose some months ago as to whether the poplar furnished any honey for our bees. I was somewhat surprised that it was not sooner replied to, and was glad to note the very proper answer given by Rev. M. Mahin in the last BEE JOURNAL.

He is entirely correct when he classes the honey-bearing tree as *Liriodendron Tulipifera.* It is not, properly speaking, a poplar, but belongs to the order of magnolias. The mistake probably occurred from the fact that throughout our Middle States, the tree is almost universally called the yellow poplar.

In the fourth edition of "Landscape Gardening and Rural Architecture," page 255, by the late lamented A. J. Downing, will be found a most satisfactory description of this beautiful tree, which Mr. D. asserts, "that, in his estimation, is decidedly the most *stately* tree in America," and mentions a specimen, three and one-half miles from Louisville, found by the younger Michaux, "which measured, at 5 feet from the ground, 22½ feet in circumferance, with a corresponding elevation of 130 feet."

Mr. Downing describes the tree thus: "The foliage is rich and glossy, and has a very peculiar form, being cut off, as it were, at the extremity, and slightly notched and divided into two-sided lobes. The breadth of the leaves is 6 or 8 inches.

The flowers, which are shaped like a large tulip, are composed of six thick, yellow petals, mottled on the inner surface with red and green. They are borne singly, on terminal shoots, have a pleasant, slight perfume, and are very showy. The seed-vessel, which ripens in October, is formed of a number of scales surrounding the central axis in the form of a cone. It is remarkable that young trees under 30 or 35 feet in height, seldom or never perfect their seeds."

Should anyone who has never seen this tree, come upon it when it is in full bloom, he would be measurably astonished at its beauty. I do not think that there is any tree in our forests that can bear a comparison with it, and, besides, the beholder would not for a moment question its honey-yielding properties—I have seen its beautiful tulip-shaped flowers (which are 2 inches, or more, in depth) heavily laden with bees, which were so earnestly struggling for the honey which the flowers contained, that they actually turned the blossom upside down, its natural position being erect, like that of the tulip, which it very much resembles; and indeed Mr. D., in his beautiful description, frequently speaks of it as the "tulip tree."

I am very sorry to state that we find this tree somewhat difficult of transplantation, which, I think, arises from the fact that, like our hickories, it has a top root, and all trees of this class I find difficult to transplant.

I will close by saying that while Mr. Downing speaks of this tree as the white-wood or tulip tree, and sometimes the yellow poplar, he classes it as a magnolia, *Liriodendron tulipifera.*

FOUL-BROOD.

The valuable article on this malady on page 347, by C. J. Robinson, Richford, N. Y., was most welcome. I have had but slight experience with this trouble, which, most fortunately, I overcame, and I hope never to see it again. Nevertheless, should the occasion require us to again deal with it, how can we so properly prepare ourselves for its destruction as by reading the experience of those who have successfully treated it?

A perusal of Mr. Robinson's last article, led me to make reference to other articles on the same subject, and from the same pen, which may be found in the last volume of the BEE JOURNAL, pages 326, 518 and 726, and I must say that should I, unfortunately, be called upon again to battle with this scourge, I feel better equipped to encounter the enemy, and freely confess that my thanks are due to Mr. Robinson for the valuable information he has afforded us on this truly vexed question.

Another thought has just occurred to me: Had I not carefully preserved my BEE JOURNALS (which I bind each year, as they come to hand), how would I have been enabled to make the references before spoken of, and how obtained the information sought after.

I am proud to state that I have been a subscriber to the AMERICAN BEE JOURNAL (and an occasional contributor) since Volume I, No. 1, and all of them have been carefully preserved and bound, with the exception of a very few missing copies, the loss of which I very much regret.

Beaver, Pa., March 16, 1891.

Trade-Marks and Marketing Honey.

BENJ. E. RICE.

The above seems to be the topic under consideration at the present time, but as for myself, I would not give 5 cents per bushel for all the trade-marks one could get up for all *bee-keepers to use*, as I have one of my own, that answers all purposes, and it reads like this: "Warranted Pure Extracted-Honey, from the Apiary of Benj. E. Rice, Boscobel, Wis."

By its use I sell all the honey that my bees can produce each year, and one year I sold, in my home market, 18 full barrels of extracted-honey, besides about 300 pounds of comb-honey.

I cause my mark to be placed on every receptacle—yes, and every pound section—that leaves my honey-house or apiary, and I really think that this idea of adopting a trade-mark, to be universally used by bee-keepers, will create more dissatisfaction than has already been caused among them.

Then, if one wished to dispose of adulterated honey, all they would have to do would be to attach the bee-keepers' trade-mark to it (which, of course, guarantees purity), and it would go like hot doughnuts in Winter.

It is often said that there is no one so sharp but that there is some one else his equal, so if any kind of a trade-mark should be designated by some one, it would be only a question of time before a duplicate of it would be used by others, and I believe the best and safest way is for each bee-keeper to have his own private mark or label. Then, if any of those dishonest honey adulterators should counterfeit it, there would be only one that would really be affected, instead of all bee-keepers.

By all means, let the trade-mark theory be dropped, unless they could use it in the Union—that being a much smaller body.

Boscobel, Wis.

[Do not be alarmed, Brother Rice. That "trade-mark" proposition was very absurd; but it will never be adopted by the Union as long as the present Manager has anything to say about it. Such a feature would be its death-blow.—ED.]

Illinois Convention—Where to be Held.

GEO. F. ROBBINS.

Dr. Miller (page 374) thinks that the meetings of the State Association should be held at Chicago, but admits that "the wish may be father to the thought." From the first I naturally wanted the Convention at Springfield, but I acknowledged to myself that it might suit the majority better to go to Chicago. When I got into the Convention I found the prevailing thought was, as I understood it, that the meetings should all be held at Springfield.

The second article, I believe, of the Constitution provides that "its principal place of business shall be at Springfield." Just what that means I cannot understand, unless it is that the meetings of the association shall be held there. I confess that I think that, in justice to all, the different meetings should be held in different places, although there is some reason why it should be a fixture at the capital.

As between Springfield and Chicago I can give three good arguments in favor of the former. The first is, it seems that the bee-keepers are pretty evenly distributed over the State. I was inclined to think that the majority of of them were in the northern half, but some of the brethren at the Convention nearly convinced me that Springfield was about the center of gravity, with the preponderance, if anything, in favor of the south.

The second argument is, our proposed union with the vague thing—existing as yet only as an idea—known as the Farmers' Club. That idea, I believe, contemplates regular annual meetings at Springfield, which would, of course, locate the Bee-Keepers' Association there with it.

The third argument is a negative one. Chicago would very likely draw a larger number, but, as Mr. Heddon intimates, a large proportion of them would come from adjoining States. Well, Chicago, has a Bee-Keepers' Convention about every year anyway, and probably has more attendants from Michigan than Southern Illinois. But we must remember the prime object in the organization of a State Association, was to further the interests of the apiarists of the State with regard to an exhibit at the World's Fair. The best place to act in this matter is at the capital.

Besides, while the presence of Mr. Heddon, and others from sister States, would be a great acquisition, and we would heartily welcome them, they could not be specially interested in our cause, and in that respect they would add nothing to its value. On looking over the above I see it is not altogether a negative argument after all. But I have done. If there is any other side, let us have it.

Mechanicsburg, Ills.

Incubating Poultry Eggs in Bee-Hives.

ARTHUR T. GOLDSBOROUGH.

Five or six months ago I wrote to you that I believed the warmth from a colony of bees might be used to incubate poultry eggs, and after experimenting would give you the results. Although I made my inner case nearly a year ago, I have had no time to test it.

I shall now give you my ideas about it, and perhaps some of your readers might wish to test the possibilities of this new incubator. The main trouble will be to get the required heat, and I greatly fear that, except during the Summer months, the natural warmth of the colony would not be sufficient to hatch eggs. Perhaps some of the gentlemen who have tested this point, might tell us what amount of heat would be available from a full colony of bees, and if it did not reach 100° there would be no use of further investigation.

If you do not wish to use a surplus-case over the eggs, the following would be a quickly-made egg-holding case or chamber. Get a half dovetail body, and saw it in the middle. This would give you a frame 20½ inches long, 13½ inches wide, and 2 inches deep, capable of holding 50 eggs. Tack onto the bottom of this frame a thin wire-cloth, and it is ready for the eggs. You could use anything you pleased for a cover. A thin board, enameled cloth, canvas, or a quilt or piece of flannel, to hold warmth.

Having found a full colony in an 8-frame dovetail hive, place your egg case on top. The warmth of the hive will ascend through the wire-cloth (fly-screen wire-netting would answer), and the eggs be free from bees. Of course, should the eggs hatch, another thin wire frame would have to be introduced between the egg case and the hive, to prevent stinging; or, when the eggs were about to hatch, they could be removed to a warm place, or be put under hens, as the pipping chicks would require more air.

A greater amount of warmth would be had from a colony already at work on sections in a surplus or half-body case, but the egg-frame would then have to be made a little different, and instead of having the end-pieces of the egg-case an inch or ⅜ thick, they should be ½ inch thick.

Now, nail in each end of the case or frame, a cross piece. Between this cross piece and the end-piece would be left a quarter of an inch space, allowing the bees below to ascend to the sections above. This case or frame, of course, must have a wire-cloth cover and a bee-space above, so that the bees could crawl over it and up into the sections.

As stated above, I doubt if the needed heat can be found in a bee-hive, yet the question might be worth testing, as the outlay would be next to nothing. There would be enough air and moisture, and the eggs could be turned if required.

Washington, D. C., March 22, 1891.

Bruce Bee-Keepers' Convention.

A. TOLTON.

The Bruce Bee-Keepers' Association met at Eden Grove, Ont., January 30, 1891, with a good attendance and interest, and several new members were gained.

The meeting was opened with an essay by Abram Rowand, entitled "The Bee at Home."

"Which is the best way to feed bees in Winter, to keep from starving till safe to open?" Feeding candy on top of frames was considered best.

"Full sheets of foundation or starters, which is most profitable?" The majority favored full sheets. They got too much drone-comb by using starters.

"Cellar or clamp wintering, which is considered best?" Cellar wintering, where practicable, was considered best; should have some protection in Spring after taking out of the cellar.

"Do bees work on potato vines, and get poisoned by so doing?" None present had seen bees on potato vines.

Controlling Increase.—John Harkley practices the following plan: When a colony swarms, place swarm on old stand; turn the old hive, facing opposite, four feet at the back of swarm, so as to allow the field bees to go in with new swarm, then turn and replace beside new swarm to allow young bees to go into new swarm; then put the frames with brood wherever there is room for them. By so doing, you let your bees swarm, and still have no increase.

Some others were in favor of contracting the brood-chamber, and giving room above.

Apicultural Notes from Nebraska.

J. M. YOUNG.

All hives containing bees should be painted, and kept so. I have tried nearly all kinds and colors, and find that white paint stands at the head of the list.

I have used 2-pound cans to a considerable extent in putting up extracted-honey, and believe that the time will come when tin cans will be considered far ahead of any other receptacle now used for extracted-honey.

My bees never did work on red clover, and they are as long-tongued bees as anyone ever saw. I never saw a single bee on a head of red clover during my entire experience, and plenty of it has always been in their reach, and quite near the apiary.

Wooden kegs will leak more or less, thereby causing the hoops to get loose and slip off, and a keg all smeared over with honey is a very disagreeable thing to handle.

The *Nebraska Bee-Keeper*, for March, makes the statement that "we have no basswood forest in Nebraska." Now, look here, friend Stilson, you surely have not been along the borders of the Missouri River, known as the "Big Muddy," or you would have seen plenty of it. There is any amount of it within one mile of my apiary. I have been all along the river, for many miles above and below here, and have always found it growing plentifully along the tributaries. But unless the woodman's ax spares the basswood, we are afraid that the honey from this source will be an unknown quantity in a few years.

When there is snow about the hives, do not disturb it until the weather is warm enough to thaw it, then just go for it and remove it as far away as you please. Working around bees in cold weather is a bad practice, especially if these is snow near the hives, for bees, when disturbed, will come out more or less, and one that alights on the snow seldom ever returns to the hive, if the weather is any way chilly. Snow is no detriment to bee-hives if the weather is cold. Do not mind it, if they are covered clear up, it will not hurt them any, but look out when old Sol comes out, and begins to warm up things.

Plattsmouth, Nebr.

Good Counsel for Beginners.

REV. S. ROESE.

Never be discouraged, although your expectations have not been realized, nor your labor repaid in dollars and cents, for the happy moments you have spent with your pets amply paid you, and should balance all accounts.

Watch carefully each hive in your apiary, notice the doings of each colony of bees, and have a full understanding of their wants and needs, at all seasons of the year, and you will seldom have to mourn over heavy losses and bad luck.

Never kill one bee, unless it is a necessity, and do not think it too much trouble to pick up a chilled bee from the ground or floor, to restore it to life again, for by so doing you may save a swarm from Spring dwindling, for one bee, to a colony, is like one cent to a dollar.

To avoid bee-stings, proceed quietly and with care, while working among your bees; do your work with dispatch, and have your hive closed before the bees become aware that you have been near.

Never disturb bees while excited, neither before nor during a thunder storm, hot windy days, honey dearth, nor while robber bees are bent on pillage.

Never work among bees without a smoker, but use it judiciously, and on proper occasions, to keep them under subjection, and prevent their anger, but in case of accidentally upsetting a hive, the spraying of the bees with cold water will have the effect of quieting them.

When working among them for any length of time, do not think it too much trouble to protect your head and face with a bee-veil.

On removing frames from the hives, work them loose first with a small chisel or pocket-knife, also move the adjoining ones slightly, to give ample room, and prevent injury to the combs.

To remove bees from the combs, a turkey or a goose feather dipped in cold water, to brush them off with, will have a quieting effect; or shake them in front of the hive, when they will readily enter without molesting you.

Keep things in order in the aipary. Have your tools, empty hives, sections, crates, etc., in their respective places, ready for use in case of need.

In marketing honey, be honest, give full weight, offer your product for only such as it is, and never lower the price with intent to undersell a fellow bee-keeper. Let your goods recommend you, and your honor introduce you, as a true representative of the class called apiculturists.

Maiden Rock, Wis.

Points About Locating an Apiary.

WALTER S. POUDER.

In locating an apiary, it will be well to remember that hives should never be placed against houses or old fences; always leave plenty of room around the hive to stand while working with the bees and bear in mind that the intense heat from the South side of a building is liable to give the bees the swarming fever.

They should never be placed where horses or cattle constantly pass; for at times, when honey is scarce, the disagreeable odor provokes an attack, and if permitted in the inclosure, the stock are in great danger of their lives, should they overturn a hive in grazing or rubbing against it. No grass or weeds should be allowed to grow within two feet of the entrance of any hive. Much time is lost by bees falling in the grass; they may become chilled by the rain or dew in cool weather, or fall victims to toads or spiders; and returning queens are liable to fall in the grass and become lost.—*Indiana Farmer.*

CONVENTION DIRECTORY.

Time and place of meeting.

1891.
April 9, 10.—Missouri State, at Boonville, Mo.
J. W. Rouse, Sec., Mexico, Mo.

May 6.—Bee-Keepers' Ass'n. and Fair, at Ionia, Mich.
Open to all. Harmon Smith, Sec., Ionia, Mich.

May 7.—Susquehanna County, at Montrose, Pa.
H. M. Seeley, Sec., Harford, Pa.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—The Editor.

North American Bee-Keepers' Association

President—P. H. Elwood....Starkville, N. Y.
Secretary—C. P. Dadant......Hamilton, Ills.

◆

National Bee-Keepers' Union.

President—James Heddon ..Dowagiac, Mich.
Sec'y and Manager—T. G. Newman, Chicago.

Bee and Honey Gossip.

Ants in the Apiary.

Sow kainit around the hives, and in about a week, sow again. Two applications per year, has kept my apiary free from the pest for the last three years. Try it. D. M. Ketcham.
Newark, N. J.

◆

Somebody's Error.

In the notice, on page 360, of the organization of the Brookfield Bee-Keepers' Association, the President's name should have been J. B. Stanclift, instead of Lorin Stariclift. Whose error it was, I do not know. J. B. Stanclift.
Brookfield, Me.

◆

Salt as a Preventive.

Last Spring I had 125 colonies, from which 4 swarms were cast during the Summer, and my surplus honey only amounted to 50 pounds. I do not dread foul-brood as much as diarrhea. In the Spring I often find considerable chilled brood, that cannot be removed from the combs, so I uncap them, sprinkle fine salt over them, and hang the combs up until needed for swarms, and never have any bad results from such combs. I believe that foul-brood exists in apiaries that are never suspected, and it has often occurred to me that salt might be a good preventive. When I am extracting, and happen to uncap any brood, I sprinkle salt over them before putting the combs back again. E. F. Meeker.
Duncan, Ills.

◆

No Loss of Bees.

In the Spring of 1890 I had 22 colonies, which increased to 54 colonies, and gave me less than 400 pounds of honey. In the Fall I united them until the number of colonies was reduced to 45, and fed the bees to provide Winter stores, and shall have to feed them again this Spring. They have been very quiet all Winter, with no loss as yet. I hope for a good honey-flow the coming season. Jos. L. Flint.
Marion, Iowa, March 26, 1891.

◆

Bees Tearing Out Brood.

What is the cause of bees tearing out sealed brood, in patches from the size of a silver dollar to the size of my hand? I had 3 colonies do it in June and July of last year, when the combs were filled with brood on both sides.
W. B. Southard.
Lone Rock, Wis.

[Scarcity of food induces the bees to prevent the increase of the family to be felt. At such times they kill the drones, and even destroy the brood.—Ed.]

◆

Scarcely any Surplus.

I have 3 colonies, which are in good condition. We had a very poor season last year, and received scarcely any surplus. Bees are dying of starvation in this vicinity. One of my neighbors lost 30 out of 32 colonies, and others are feeding their bees. There are prospects for a good honey crop this season, for the white clover is looking well, there having been plenty of rain last Fall, and I have hopes of a good yield.
Horace Rushton.
Manchester, Mich., March 22, 1891.

◆

Poorest Season in Six Years.

I have been engaged in bee-keeping for the past six years, and last season was the poorest in my experience, the honey crop not averaging over 20 pounds per colony. Bees seem to have wintered fairly well. Mine were left on the summer stands for the first time, without any protection except a light covering over the frames. The weather has been very mild, and bees have taken flights quite frequently during the entire Winter. J. HAMER.

Leonardville, Kans., March 19, 1891.

◆

State Fair Premiums.

There is evidently something wrong, either with Mr. Trego's statement on page 358, or with his advertisement. In the former, he states that he exhibited "4 one-frame nuclei," while in his advertisement he says: "Our bees took first premium at the Illinois State Fair, in 1890." The Illinois State Fair does not give any premiums on nuclei, only on colonies, and as the only colonies of bees exhibited at that time were the property of Aaron Coppin, how can Mr. Trego reconcile these statements? The premium was given to Aaron Coppin, and not to Mr. Trego. AARON COPPIN.

Wenona, Ills.

[Mr. Trego sends us the following testimony, in answer to the above:

EDITOR BEE JOURNAL:—I have this day received a letter from J. V. Caldwell, of Cambridge, Ills., stating that he gave S. F. Trego, of Swedona, Ills., the first premium on his Italian bees at the Illinois State Fair in 1890.

S. J. ICKES, Justice of the Peace.

Swedona, Ills., March 25, 1891.

Mr. Trego adds: "Before Mr. Coppin makes any more statements, he should examine the books of the Secretary of the Fair."

The discussion regarding the bee and honey exhibit, and the award of premiums at the Illinois State Fair, having reached a stage where it has ceased to be of any interest to the general reader, and become merely a personal controversy between two or three correspondents, we have determined not to publish anything more on that subject.—ED.]

◆

Bee Classification.

There are three classes of worker bees in a thrifty colony, the nurse bees, the wax workers, and honey gatherers. The first duty the young bees perform is feeding the young brood. The second labor is procuring the wax and building the comb. Last, gathering honey.—*Ex.*

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

ADVERTISING RATES.

20 cents per line of Space, each insertion.

No Advertisement inserted for less than $1.00.

A line of this type will admit about eight words.
ONE INCH will contain TWELVE lines.

Editorial Notices, 50 cents per line.
Special Notices, 30 cents per line.

Transient Advertisements must be paid for IN ADVANCE.

DISCOUNTS.—On **10** lines, or more, 4 times, 10 ⅌ cent.; 8 times, 15 ⅌ cent.; 13 times, 20 ⅌ cent.; 26 times, 30 ⅌ cent.; 52 times, 40 ⅌ cent.

On **20** lines, or more, 4 times, 15 ⅌ cent.; 8 times, 20 ⅌ cent.; 13 times, 25 ⅌ cent.; 26 times, 40 per cent.; 52 times, 50 ⅌ cent.

On **30** lines, or more, 4 times, 20 ⅌ cent.; 8 times, 25 per cent.; 13 times, 30 ⅌ cent.; 26 times, 50 ⅌ cent.; 52 times, 60 ⅌ cent.

☞ On larger Advertisements discounts will be stated, on application.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

☞ Subscribers who do not receive their papers promptly, should notify us at once.

☞ Send us *one new* subscription, with $1.00, and we will present you with a nice Pocket Dictionary.

☞ The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to pay for another year.

☞ Systematic work in the Apiary will pay. Use the Apiary Register. It costs:

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 25
" 200 colonies (420 pages)	1 50

☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

CLUBBING LIST.

We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

	Price of both.	*Club.*
The American Bee Journal	$1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Guide	1 50	1 40
Bee-Keepers' Review	2 00	1 75
The Apiculturist	1 75	1 65
Canadian Bee Journal	1 75	1 65
American Bee-Keeper	1 50	1 40
The **7** above-named papers	6 00	5 00
and Langstroth Revised (Dadant)	3 00	2 75
Cook's Manual (1887 edition)	2 25	2 00
Quinby's New Bee-Keeping	2 50	2 25
Doolittle on Queen-Rearing	2 00	1 75
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 60	1 50
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	2 20
Western World Guide	1 50	1 30
Heddon's book, "Success,"	1 50	1 40
A Year Among the Bees	1 50	1 35
Convention Hand-Book	1 50	1 30
Weekly Inter-Ocean	2 00	1 75
Toronto Globe (weekly)	2 00	1 70
History of National Society	1 50	1 25
American Poultry Journal	2 25	1 50
The Lever (Temperance)	2 00	1 75
Orange Judd Farmer	2 00	1 65
Farm, Field and Stockman	2 00	1 65
Prairie Farmer	2 00	1 65
Illustrated Home Journal	1 50	1 35
American Garden	2 50	2 00
Rural New Yorker	2 50	2 00
Nebraska Bee-Keeper	1 50	1 35

Do not send to us for sample copies of any other papers. Send for such to the publishers of the papers you want.

Bee-Keeping for Profit, by Dr. G. L. Tinker, is a new 50-page pamphlet, which details fully the author's new system of bee-management in producing comb and extracted-honey. and the construction of the hive best adapted to it—his "Nonpareil." The book can be had at this office for 25c.

A Nice Pocket Dictionary will be given as a premium for only **one new** subscriber to this JOURNAL, with $1.00. It is a splendid little Dictionary—just right for the pocket. Price, **25 cents.**

Supply Dealers desiring to sell our book, "Bees and Honey," should write for terms before issuing their Catalogues.

HONEY AND BEESWAX MARKET.

DETROIT, March 21.—Comb-honey is quoted at 14@15c; demand light. Extracted, 7@8c. Beeswax in fair demand, 28@29c.
M. H. HUNT, Bell Branch, Mich.

NEW YORK, March 21.—Market is bare of comb-honey. We quote: Extracted, buckwheat, 7@7½c; California, in good demand, at 6¾@7¼c, and market well supplied; Southern, none in market. Beeswax, 25@27c.
HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

KANSAS CITY, March 21.—Market continues about the same; stocks becoming light; no receipts. We quote: White 1-lb. comb, at 16@18c; dark, 12@13c; California white, 2-lb., 4@15c; extracted, 6@7c. Beeswax, 22@25c.
CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CINCINNATI, March 23.—Demand good for extracted-honey, at 6@8c; comb-honey in fair demand at 15@17c for choice, in a jobbing way. Beeswax is in good demand at 24@26c., for good to choice yellow.
C. F. MUTH & SON,
Corner Freeman & Central Aves.

CHICAGO, Mar. 23.—Demand at present not very active on comb honey. Fancy white, 17c; white, 16c; white, 2-lb. sections, 14c; buckwheat, 1-lb. sections, 12c; extracted, 7@8c. Beeswax, 28c.
S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, Mar. 21.—Fancy white 1-lb. comb, 18c; fair to good, 17c; dark 1-lb., 14@15c; 2-lb. white comb, 15@16c; 2-lb. dark, 13@14c; extracted, white, 7c; dark, 5@6c.
HAMBLIN & BEARSS, 514 Walnut St.

CHICAGO, March 30.—There is the usual Spring demand for honey, and best white continues to bring 17@18c; honey that is off in color and condition sells for 2@3c less; very little call for dark comb. Extracted, is selling at 7@8c, in cans or barrels. Beeswax, 27@28c. Now is the time to get all comb-honey on the market, as after this month hardly any is sold.
R. A. BURNETT, 161 S. Water St.

BOSTON, Mar. 21.—Honey is in fair demand; supply short. White 1-lb. comb is very scarce and wanted, at 19@20c; fair to good, 18@19c; 2-lb. sections, 16@17c. Extracted, 8@9c. No beeswax on hand.
BLAKE & RIPLEY, 57 Chatham Street.

ALBANY, N. Y., March 21.—Honey market is slow, with small stocks of comb. We quote: White comb at 15@16c; mixed, 13@14c; dark, 12@13c. Extracted, light, slow at 7@8c; dark, firm at 6c. Beeswax, 26@30c.
H. R. WRIGHT, 326-328 Broadway.

We Club the American Bee Journal and the Illustrated Home Journal, one year for $1.35. Both of these and Gleanings in Bee Culture, for one year, for $2.15.

The Convention Hand-Book is received, and I am well pleased with it. Every bee-keeper should have a copy.
CHARLES WHITE.
Farmers' Valley, Nebr., Mar. 3, 1891.

Convention Notices.

☞ The 8th semi-annual meeting of the Susquehanna County Bee-Keepers' Association will be held at Montrose, Pa., on Thursday, May 7, 1891.
H. M. SEELEY, Sec., Harford, Pa.

☞ The Fourth semi-annual meeting of the Missouri State Bee-Keepers' Association, will meet at Boonville, Mo., on Thursday and Friday, April 9, 10, 1891. There are quite a list on programme for essays, including some from ladies. A cordial and pressing invitation is extended to all bee-keepers, and their wives and daughters, and any other ladies, to attend the Convention. Rates have been secured at the two leading hotels for those in attendance. Come, and let us get acquainted, and have an interesting meeting. J. W. ROUSE, Sec., Mexico, Mo.

Remember the *sad* experience of last season! Everyone should order all the Supplies necessary for the Apiary *at once*, and avoid "the rush." The delays and annoyances of last year should teach a valuable lesson in this line.

Red Labels are quite attractive for Pails which hold from 1 to 10 lbs. of honey. Price, $1.00 per hundred, with name and address printed. Sample free.

Supply Dealers should write to us for wholesale terms and cut for Hastings' Perfection Feeders.

Calvert's No. 1 Phenol, mentioned in Cheshire's Pamphlet on pages 16 and 17, as a cure for foul-brood, can be procured at this office at 25 cents per ounce, by express.

Wants or Exchanges.

Under this heading, Notices of 5 lines, or less, will be inserted at **10 cents per line**, for each insertion, when specially ordered into this Department. If over 5 lines, the additional lines will cost 20 cents each.

WANTED—To sell Bronze Turkey Eggs from prize stock; $3.00 per 13.
14A1t J. C. PROVINS, Masontown, Pa.

WANTED—Your wax to work up at lowest living prices. Please write at once to J. V. CALDWELL, Cambridge, Ills. 13A1t

WILL EXCHANGE Foundation for Wax or cash; will also make wax into foundation when sent to me, at the lowest price in the world. Send for samples and prices to JACOB WALLERSHEIM, Kaukauna, Wis. 13A4t

FOR SALE—Pure, home-made Blackberry Wine, for table or medicinal use. Warranted. Address R. E. PARCHER, Wausau, Wis.
13A3t

WANTED—To exchange 1-lb. thin Vandervort f'd'n for 2 of wax. Samples and testimonials free. C. W. DAYTON, Clinton, Wis.
8A10t

Bee-Veils.—Mr. George E. Hilton, in an article in the Michigan *Farmer*, on the management of any apiary, writes thus:

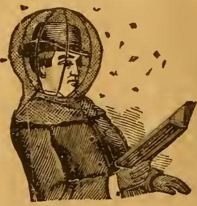
> After trying several bee-veils, I have decided on the "Globe" bee-veil. It was first invented as a protection against flies and mosquitoes; it was a success for this, so now the bee-keepers have adopted them. It is so fine you hardly discern anything before your face. It is very easily put together, no trouble to put on or take off, and folds up compactly in a paper box 6x7 inches, by 1 inch deep. The weight of the entire veil is only 5 ounces, and can be sent by mail for $1.00. This looks like a big price, but with care one will last almost a life-time.

This is the universal opinion of the Globe bee-veil. It is superior to any other on the market.

We send both the Home Journal and Bee Journal for one year, for $1.35.

The "Globe" Bee Veil

Price, by Mail or Express, $1.00.



There are five cross-bars united by a rivet through their center at the top. These bars are buttoned to studs on the neck-band. The bars are of best light spring steel. The neck-band is of best hard spring brass. The cover is of white bobinet with black face-piece to see through.

It is very easily put together; no trouble to put on or take off; and folds compactly in a paper box 6x7 inches, by one inch deep. The protection against bees is perfect—the weight of the entire Veil being only five ounces.

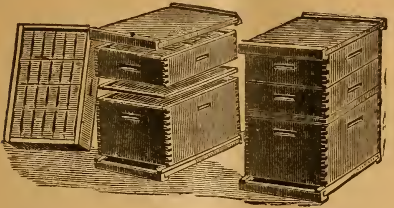
Extra Nets, 25 cents each.

CLUBBING OFFER.

We will send this Veil and the Bee Journal one year for **$1.75.** Or, we will give the Veil **Free** for three (3) **New** Subscribers to the Bee Journal, with $3.00 to pay for them.

Subscriptions to the Home Journal may be included in all Clubs, counting two (2) Home Journals as equal to one (1) Bee Journal.

Dovetailed Hives, Containing 8 Frames.



These Hives have become so popular that we have concluded to keep them for sale. All orders will be filled promptly.

No. 1, a complete 1½-story hive for comb-honey, includes bottom-board; body with 8 thick-top frames, division-board, 1 super with follower and wedge; 6 section-holders with tin separators, sections, and flat cover.

No.2, is just the same as No.1, and another super with contents added, making a two-story hive for comb-honey.

No.5 is a 2-story hive for extracting, and includes bottom and flat cover, two bodies with 16 frames and two division-boards.

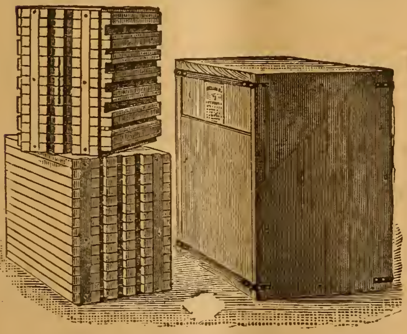
PRICES—COMPLETE HIVES, NAILED.

No. 1, $1.50; No. 2, $2.00; No. 5, $1.60. We furnish the Separators and Sections at these prices, for the nailed hives.

PRICES—MATERIAL IN THE FLAT.

	No. 1.	No. 2.	No. 5.
1 Hive for........	$1.00....	$ 1.20....	$ 1.20
5 Hives for........	4.50....	5.50....	5.50
10 Hives for........	8.00....	10.00....	10.00

For 20 hives, deduct 2 per cent.
For 30 hives, deduct 3 per cent.
For 40 hives, deduct 4 per cent.
For 50 hives, deduct 5 per cent.
For 60 hives, deduct 6 per cent.
For 80 hives, deduct 8 per cent.
For 100 hives or more, deduct 10 per cent.



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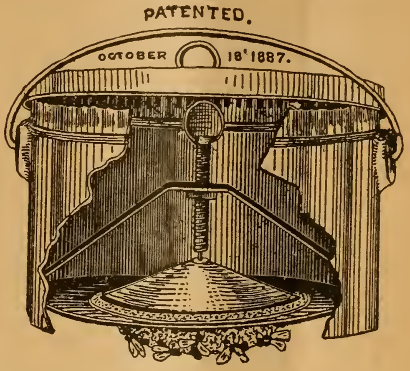

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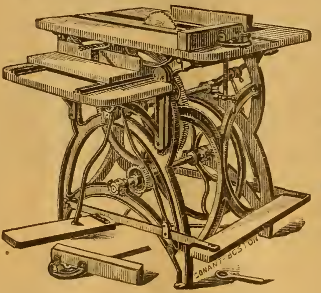

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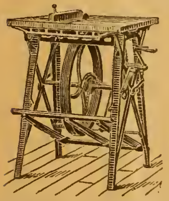

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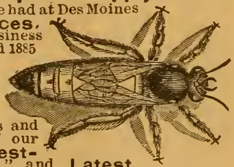

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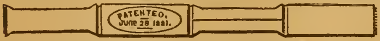
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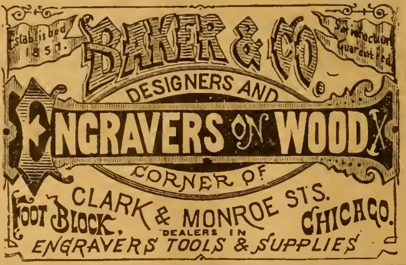

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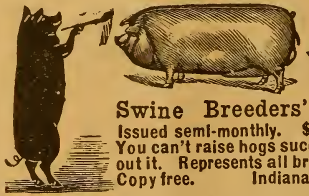

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THE AMERICAN BEE JOURNAL
CIRCULATES
ALL OVER THE WORLD
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVII. April 9, 1891. No. 15.

Editorial Buzzings.

Before the blue-bird wings its way
To northern glade and dell,
There comes a dear and happy day
When buds begin to swell.

◆

A Son was born to Mr. and Mrs. Ernest R. Root on Easter Sunday, March 29, 1891. His name is Leeland Ives Root, and his weight is 8 pounds. A cute birthday card comes to our desk announcing the event. Ernest is now "father," and Uncle Amos is a "grandfather." The Bee Journal offers congratulations all around.

◆

Bulletin No. 9, of the Rhode Island Agricultural Experiment Station, is devoted to experiments in apiculture, by Samuel Cushman. We will republish some of them as soon as we can find room.

◆

Samples of Perforated Zinc are received from Dr. G. L. Tinker. The perforations are smooth, and the workmanship excellent.

Father Langstroth, in response to our letter of recent date, writes as follows:

Dear Friend:—Your letter of sympathy is received. I thank you for the same. We do, indeed, look to the Divine love as the true source of comfort in the sore bereavement which we have sustained. I am too much affected by disease to say more.

Yours affectionately,
L. L. Langstroth.

This short letter betrays his state of mind, and at the same time shows the severity of the bereavement in the loss of his son-in-law, with whom he has for years had a "home." What the future arrangements are to be we are not informed, but we hope they will be none the less pleasant for our aged friend and benefactor. This reminds us of the annuity fund, created some three or four years ago. Those who then subscribed to it, should be prompt in sending the amount this year, and thus cheer the heart and renew the resources of the apicultural "grand old man" of America—the Rev. L. L. Langstroth.

◆

H. D. Davis, an apiarist in Vermont, with a manufacturing outfit, and 300 colonies, is contemplating the feasibility of removing his plant to Denver, Colo., increasing the colonies to 1,000, and engaging extensively in the bee-business. So says an exchange.

◆

Fire destroyed the store-room of the branch apiary of Mr. James Heddon, at Glenwood, Mich., March 26. It probably caught fire by the sparks from a neighboring sawmill. It contained a honey extractor, and a lot of cans, tools, etc., and was fully insured. This we learn from Mr. Ira D. Deming, at Glenwood.

◆

Mr. Hiram J. Ward, a fruit-grower and honey-producer of Farmington, Kans., gave us a call on Monday, and left his photograph on our desk. He is an old subscriber to the Bee Journal, having taken it ever since 1868.

Comb-Foundation and Foul-Brood.

Last week, on page 437, we stated that we did not agree with Mr. Corniel about the spreading of foul-brood by the use of comb-foundation, and called for the *modus operandi* of the larger manufacturers to show that the temperature, while manufacturing, was sufficiently high to kill the spores and microbes. We are now glad to present the following letters on the subject, and we think they will show most emphatically that the fears of Mr. Corniel are entirely groundless:

Mr. Corniel, in the AMERICAN BEE JOURNAL, page 447, says—

> The opinion is held by prominent bee-keepers, both in Europe and America, that the contagion of foul-brood may be communicated by the use of comb-foundation, made from the wax of infected colonies. Instances are given in which the reasons for believing that the disease was conveyed by this means, seem very strong.

I saw, also, in the *Canadian Bee Journal*, of March 15, that the number of prominent bee-keepers of both Europe and America, alluded to by Mr. Corniel, amounts to four—two in England, and two in the United States—and that the opinions of these gentlemen are nothing but guess work. I notice that, with Mr. Corniel, the United States means America, and England means Europe, for I do not remember having seen, in any paper from France, Germany, Italy, or Switzerland, a single item intimating that the use of comb-foundation may be the cause of foul-brood.

Besides, although we have sold half a million of pounds of comb-foundation in thirteen years, we have not yet received a complaint from any bee-keeper having reasons for believing that our foundation conveyed the disease to his bees; yet we buy wax from dealers living in every part of the United States, from Florida to Oregon, and from Vermont to New Mexico; and some of the wax was certainly rendered from combs containing foul-brood. Furthermore, we have received wax melted from combs whose bees had died of foul-brood, and can give the names of the parties who sent it to us, if necessary.

The store-room in which we weigh, sort and keep the wax, as it comes from dealers or bee-keepers, is often open to our bees, and its windows are provided with bee-escapes. Sometimes there are thousands of bees running over the cakes, attracted by the smell. Yet we have never seen a single case of foul-brood in any of our apiaries. Does not such facts prove that the heat at which the wax melts is sufficient to kill the spores of foul-brood in the combs?

Pasteur has ascertained that all the seeds of disease which may exist in wine, can be destroyed if the wine is heated to the temperature of 140°. In accordance with his information heaters, called in France œssotherms, were built to heat the wine, and we know by experience that they accomplish the desired aim perfectly. As beeswax does not melt at less than 148°, and as it is impossible to melt it without raising the temperature higher, there can be no doubt that all the spores of foul-brood are killed in the rendering of the combs.

Mr. Corniel writes, also:

> There is good reason for believing that foundation is sent out which has never been heated up to 190°.

We have ascertained that, to get rid of all the impurities of beeswax, we should keep it liquid for at least 24 hours. To obtain such a result, we melt the wax with water, in a boiler holding about 800 pounds, and do not put the liquid in our double-walled tanks until it has been heated to 212°, skimming, during the heating, all of the impurities which rise to the surface. The scum is emptied into barrels *out-of-doors*, with all the dirt scraped from the purified cakes. Although this scum has never been heated to 212°, our bees which visit it freely, do not infect their hives.

From these experiences, which have extended over a period of 14 years, are we not entitled to proclaim that the heat at which beeswax melts is sufficient to kill the spores of foul-brood? We think that no scientific guessing can hold good in the presence of the facts related above.

The causes which may scatter foul-brood in localities where it was unknown, are very difficult to ascertain. As this malady is not spontaneous, the main cause is certainly the bringing of bees from one locality to another. This malady is not known around us, but suppose that a novice in bee-culture, living ten miles away, receives from a distance, a foul-brood colony; another apiary, two miles distant, can contract the disease, which, in turn, may be transferred to another neighbor, long before the first one knows anything of foul-brood, and so on. The malady may reach our apiary after a lapse of two or three years; then, who can trace it back?

According to my experience, to charge the spreading of foul-brood to comb-foundation, is about as sensible as the assertion of a noted French bee-keeper of the old school, who used to declare that the spreading of this disease was due to the movable-frame hives.

Hamilton, Ills. CHARLES DADANT.

I have just read Mr. Corniel's article, in regard to the danger of spreading foul-brood through the medium of comb-foundation, and will detail our method of handling the wax. Our wax is all refined by melting in a large copper tank (by steam), and keeping it at the boiling point for 6 or 7 hours. The tank is double, the inner one being surrounded by water; the steam heats the water, and does not come in contact with the wax, so that the settling process goes on all the time. Taking into consideration the melting of the combs into wax, in the first place, and the continued heat in refining, and again melting to sheet it, I hardly think there is any possible danger of contagion. If there was any danger, after this process, I should think that nearly all the bees would be affected, for the use of comb-foundation is so general. We are told that honey infected is safe to feed, if boiled; and that the scalding of hives will disinfect them. Wax will melt, or start to, at 145°, but it takes about 157° to *keep* it melted.

M. H. HUNT.

Bell Branch, Mich., April 2, 1891.

Appropriation for the World's Fair.

The Bill to appropriate $5,000 for the exhibit of bees and honey at the World's Columbian Fair is now before the Illinois Legislature. It was introduced on March 25, by Hon. Joseph M. Hambaugh, and was, as usual, referred to the proper committee.

We gave a portion of this Bill last week—such as was telegraphed to the daily papers. As it was incomplete, and omitted several important matters, we now publish it in full:

WHEREAS, The large revenues derived annually from the sale of honey by the bee-keepers of Illinois make this important industry worthy of the fostering care of the General Assembly; and

WHEREAS, A creditable apiarian exhibit by bee-keepers of Illinois at the World's Columbian Exposition, to be held in Chicago in 1893, will call marked attention to this growing industry, and greatly assist the development of the same, and thereby add largely to the material prosperity of the State; and

WHEREAS, The Illinois Bee-Keepers' Association, an organization composed of leading apiarists of the State, and duly incorporated, in compliance with the statutes of this State, have petitioned this General Assembly for an appropriation to defray the expenses of making an exhibit of bees, honey and apiarian supplies and appliances at the World's Columbian Exposition, in 1893; therefore

SECTION 1. *Be it enacted by the People of the State of Illinois, represented in the General Assembly*, That there be and is hereby appropriated to the Illinois Bee-Keepers' Association, out of any money in the treasury not otherwise appropriated, the following sums, to-wit: For the payment of expenses of making an exhibit of bees, honey, apiarian supplies and appliances at the World's Columbian Exposition, to be held in Chicago in 1893, the sum of $5,000, or so much of said sum as may be required to make a creditable display.

SEC. 2. The Illinois Bee-Keepers' Association may, in its discretion, employ a competent person as an executive officer for service in preparatory work and care of the State Apiarian Exhibit, whose powers, duties and title shall be prescribed by said Bee-Keepers' Association, and whose compensation shall be fixed by said Association, subject to the approval of the Governor. Said executive officer shall be removed at the pleasure of said Association. Any member of said Bee-Keepers' Association, other than said executive officer, rendering service in connection with said State exhibit by instruction of said Association, may receive, as compensation therefor, only necessary expenses and cost of transportation while actually employed in such service.

SEC. 3. The sum of $5,000, or so much thereof as may be necessary for the purpose, is hereby appropriated to defray the cost and expenses of the work contemplated by this act, to be paid by the State Treasurer from the funds not otherwise appropriated, upon warrants drawn by the Auditor of the State, which warrants shall be drawn only upon itemized vouchers and receipted bills, signed by the President of the Illinois Bee-Keepers' Association, countersigned by the Secretary thereof, and approved by the Governor: *And provided further*, That in no event shall the State of Illinois be held, or become liable, in any amount in excess of the sum hereby appropriated.

Now, if every bee-keeper in Illinois has not already written to the Senator and Assemblyman of his district, let that be done at once, urging them to support the measure, and endeavor to secure the necessary appropriation for a creditable exhibition of the products of the bee, at the coming World's Fair.

Transferring Bees.—In reply to several inquiries, we will say that Mr. Heddon transfers bees in the following way, which he claims to be far preferable to the old way:

> About swarming time he drives the queen and a majority of the bees into a forcing box, and then removes the old hive back a few feet, and puts in its place a hive with its frames filled with foundation, and pours the forced swarm in front of it. All field-workers will leave the old hive, and join the queen. It would be well to return a part of the bees to the old hive, for fear that the brood will get chilled, being careful not to take the queen. Twenty-one days after the forcing of the bees, Mr. Heddon drives the old hive clean of its bees, uniting with the former drive. The worker-brood is all hatched, and nothing remains but the honey and comb, which can be either transferred, or honey extracted and comb melted.

To Prevent Robbing, close the entrance so as to give passage but for a single bee at a time. This is effective, if the bees will defend themselves; if not, remove them to a cellar for a few days, then place them on a new stand, or exchange places with the colony that is robbing it. This will answer a question sent in by W. R. Reynolds, of Cave City, Ky.

Well Satisfied.

> I would not do without the AMERICAN BEE JOURNAL for anything. It is the best and cheapest publication on bees and honey that I know.
>
> THOMAS FOREACRE.
>
> Marshallton, Del.

Sections for Comb-Honey.—We have discarded the honey-boxes of yore, holding many combs, and even the unicomb two-pound section has nearly gone out of use, leaving the one-pound one-piece section as the sole favorite.

Now, another "advanced step" is very necessary. There should be a uniformity of size and width for this one-pound section. The present condition of things, where many sizes and shapes, and many widths are used, should give way to one size, and one, or at most two, widths for sections where separators are used or dispensed with.

All supers should be made to accommodate one size of sections. This could easily be done, and would save much confusion and inconvenience. There are many other good reasons for uniformity.

Uniformity should be *the rule* in sections and crates, and any departure from that rule should be disapproved and frowned down. These are our views, and have been expressed quite often in the past. We now invite a formal discussion of the points presented, and suggestions for a way out of the difficulty. The BEE JOURNAL will give space for a full and free discussion of the subject, as one of the important topics now interesting all bee-keepers.

Honey for La Grippe.—In commenting upon the present condition of the honey market, Mr. R. A. Burnett remarks as follows:

> The market is about cleaned up on comb-honey; at the ruling prices of 17 and 18 cents, very little is coming, and we are of the opinion that there is not any in the producers' hands. There has been an unusually large Spring trade in comb-honey, as many are using it as a preventive and cure of *la grippe*.
>
> R. A. BURNETT.
>
> Chicago, Ills., April 2, 1891.

In this and many other cities, *la grippe* has been more devastating and deadly than former epidemics of small-pox, diphtheria, and the like. The liberal use of honey has been one of the best remedies, as well as preventives.

Deadly Poison on Fruit Bloom.

The Bill introduced into the Legislature by Hon. J. M. Hambaugh, making it a misdemeanor to spray fruit trees with poison while in bloom, has been referred to the Committee on Horticulture, and will doubtless be promptly reported upon favorably. The full text of the Bill is as follows:

A Bill for an act to protect bees from poison through the spraying or otherwise treating of fruit or other trees, shrubs, vines or plants with london purple, paris green, white arsenic or other virulent poisons, while the aforesaid trees, shrubs, vines or plants are in bloom.

Whereas, Spraying of trees, shrubs, vines or plants at the proper time greatly improves the conditions favorable for a crop of fruit; and

Whereas, Spraying should never be permitted until the blossoms have fallen from the latest blooming trees; and

Whereas, The insects injurious to fruit do not make their appearance until about ten days after the bloom; and

Whereas, The spraying of trees, shrubs, vines, etc., while the same are in bloom poisons the bees and seriously injures the bee-keepers, and reduces the signal benefits to the fruit growers, who have repeatedly demonstrated that the bees ensure better crops; therefore

Section 1.—*Be it enacted by the People of the State of Illinois, represented in the General Assembly*, That it shall be unlawful for any person to spray any fruit trees, shrubs, vines or plants with paris green, london purple, white arsenic, or other virulent poisons, or to scatter upon such trees, shrubs, vines or plants, powdered london purple, paris green, white arsenic, or other virulent poisons, while such trees, shrubs, vines or plants are in blossom, and so may be visited by honey-bees in quest of nectar or pollen.

And that any person who shall spray such trees, shrubs, vines or plants with london purple, paris green, white arsenic, or other virulent poisons, or shall scatter the poison upon the same while in blossom, shall be deemed guilty of a misdemeanor, and for the first offense shall be punished by fine in any sum not less than five dollars, and for the second offense by fine in any sum not less than twenty-five dollars, and in default of payment of the same by imprisonment in the county jail not more than ninety days.

2. The fines resulting from the operations of this statute shall be paid to the State Treasurer by the court imposing the same, and be placed by said Treasurer to the credit of the Illinois Bee-Keepers' Association to be used by said association in promoting and developing the industry of bee-keeping in this State.

3. The Illinois Bee-Keepers' Association may, in its discretion, employ a competent person as an executive officer for service in enforcing the provisions of this statute, whose powers, duties and title shall be prescribed by said Bee Keepers' Association, and whose compensation shall be fixed by said association, subject to the approval of the Governor. Said executive officer shall be removable at the pleasure of said association.

4. The fines resulting from the operation of this statute, or so much thereof as may be necessary for the purposes named above, are hereby appropriated to defray the cost and expenses of the work contemplated by this act, to be paid by the State Treasurer from funds not otherwise appropriated, upon warrants drawn only upon itemized vouchers and bills signed by the President of the Illinois Bee-Keepers' Association, countersigned by the Secretary thereof, and approved by the Governor: *And provided, further*, that in no event shall the State of Illinois be held or become liable in any amount in excess of the revenue obtained through the operations of this statute.

This Bill should be passed *at once*, and go into effect immediately, or it will be useless this season. An emergency clause may help matters, if added to the Bill, and make it operative as soon as it becomes law.

All Illinois bee-keepers should try to influence their Senators and Representatives to vote for the measure.

Blooming Fruit and Busy Bees.

Fruit is just beginning to bloom in Texas; the bees are busy, and appear to be doing well. They have, however, been able to get pollen, and, perhaps, a little honey for a month past, on warm days.—*Exchange.*

Bee-Legislation in Illinois about foul-brood, is thus commented upon, by Mr. Hughes:

Representative Smith will soon introduce a bill into the Legislature providing for an Inspector of foul-brood, and for payment of his salary by a tax of 2 cents on each colony of bees in the State. This suits me. But I would suggest that the money so raised be paid to the Illinois Bee-Keepers' Association, to be used as they think best. Representative Hambaugh has also introduced a bill regulating the spraying of fruit trees. Now is the time for bee-keepers to bestir themselves, and place our industry on an equal footing with other pursuits.
Mt. Zion, Ills. J. S. Hughes.

It is a Fact that a great deal of study is now being put upon the advertising pages of leading periodicals. Experts write advertisements, the best artists design illustrations, and it is a matter of considerable interest, therefore, when one of the leading advertising firms of the country announce that they have published a sample book, in which they show 200 or more different advertisements they have written and designed for their customers. Alden & Faxon, Cincinnati, Ohio, well known in the advertising field, have just published a book with this title, and will send it on receipt of six cents in stamps. The collection is quite unique, and shows what versatility there is in the American mind, regarding the wants and necessities of people who read newspapers. In addition to the advertisements, information and hints are given to advertisers, whether they are old and experienced, or whether they are just starting on the road to fame and fortune, with the newspapers as their capital.

Binders made especially for the Bee Journal for 1891 are now ready for delivery, at 50 cents each, including postage. Be sure to use a Binder to keep your numbers of 1890 for reference. Binders for 1890 only cost 60 cents, and it will pay you to use them, if you do not get the volumes otherwise bound.

Paint for Hives.—A cheaper and more durable than ordinary paint, can be made as follows:

Three parts slacked lime,
Two parts sifted wood ashes,
One part fine sand.

Mix the whole intimately, and sift the mixture through a fine sieve. Then add as much boiled linseed oil as will make the mass of a proper consistence to be applied with a tolerably stiff paint brush. The more perfectly the ingredients are mixed, the more durable the paint will be; and the paint should be frequently stirred when using, to prevent the sand from settling to the bottom. Two coats are sufficient. The first is put on thin, and will be mostly absorbed by the wood. When this is pretty dry, the second coat is to be put on as thick as it can be properly spread with a brush. This paint is of a gray color when dry.—*Exchange.*

Bumble-Bees as Fertilizers.

H. N., of Caledonia Station, Michigan, writes: 1. Has the bumble-bee anything to do with the filling of the second crop of clover? 2. Has it anything to do with fruit fertilization?

1. Prof. Beal, in his "Grasses of North America," details an experiment in which the yield of seed from clover plants worked on by bumble-bees was four times as large as from similar plants from which the bees were kept away. A writer whom he quotes, says: "It is at least certain that bumble-bees are the chief fertilizers of the common red clover." Prof. Beal says: "It is not improbable that the time may come when queen bumble-bees will be reared, bought and sold, for their benefit to the crop of clover seed." 2. Yes.—*O. J. Far.*

Catalogues and Price-Lists for 1891 have been received from

A. G. Hill, Kendallville, Ind.—36 pages—Bee-Keepers' Supplies and Bees.

Oliver Foster, Mt. Vernon, Iowa—16 pages—Queens and Supplies for the Apiary.

Wm. H. Bright, Mazeppa, Minn.—24 pages—Bee-Keepers' Supplies.

J. M. Kinzie, Rochester, Minn.—16 pages—Supplies for the Apiary.

F. A. Lockhart & Co., Lake George, N. Y.—8 pages—Carniolan Bees and Queens.

Queries and Replies.

Eight or Ten-Frame Hives.

Query 761.—1. If you were going to run an apiary of not more than 50 to 60 colonies, Spring count, as a side-issue to farming, and wished to generally leave from 25 to 35 pounds of honey in the brood-chamber for the colonies to winter on (barring bad seasons like the one just past), which would you use, the 8 or the 10-frame Langstroth hive ? 2. Is an outer-cap or upper-story worth the extra cost to protect the sections from the heat and cold, or is it a useless expense ?—Iowa.

1. Eight-frame. 2. I think it would not pay.—A. J. Cook.

1. The 8-frame hive. 2. It is a useless expense.—R. L. Taylor.

1. We prefer large hives. 2. All our hives have an outer cap.—Dadant & Son.

1. The 10-frame Langstroth. 2. I never use the outer-cap. It might be of benefit in some localities.—J. M. Hambaugh.

1. I would use the 10-frame Langstroth. 2. An upper story pays, and, for extracted-honey, it is a necessity.—A. B. Mason.

1. The 8-frame hive. 2. That outer-cap is more than useless. Always use a shade board in any case.—James Heddon.

1. The 8-frame. 2. I think it worth all it costs in any case; and indispensible if you winter out-of-doors.—Mrs. L. Harrison.

1. I should use the 10-frame hive, most assuredly. 2. I have found that, in my climate, bees winter as well in single as double walled hives.—J. E. Pond.

1. The 8-frame. 2. If by "outer-cap" you mean a case outside of the super which holds the sections, No. I think the section-case is all that is necessary.—Eugene Secor.

1. I prefer the 8-frame hive. 2. An outer-case, giving an air space all around the sections, is a good thing ; yet it adds to the cost of the hive.—H. D. Cutting.

1. I use 8, but if I were running a farm I might want 10. 2. I doubt if it is worth while to have anything outside the super, if that is ⅞ inch thick.—C. C. Miller.

1. If I produced extracted-honey, I should use the 8-frame hive with a super. If comb-honey, much would depend on the honey supply. If it came in a rush, with basswood, I would use 10 frames, and contract to 8.—M. Mahin.

1. If you use skill and judgment in managing your apiary, use the 8-frame hive; but if you run it by the "let alone" system, use the 10-frame hive. 2. The upper story is well worth the extra cost.—J. P. H. Brown.

1. The 10-frame. 2. I use a cap or hood, and while it has its disadvantages, I believe they are more than balanced by its advantages, and the protection to the sections is only one of them.—G. M. Doolittle.

1. I would use the 8-frame hive rather than the 10-frame, but a hive not more than 7 inches deep in preference to either. 2. A super that will just hold the sections is cheaper than an outer-case.—C. H. Dibbern.

1. I would use a 10-frame hive, unless I was willing to do a good deal of feeding ing in the Fall and Spring. 2. With me, an outer-case is a useless appendage, as well as a useless expense. But a man who farms, as well as runs an apiary, might be better off with over cases for the surplus departments of his hives, as it is to be presumed that he would hardly attain to the highest skill as a hive manipulator.—G. W. Demaree.

1. I would use the 8-frame hive with frames 7 inches deep, in two stories. Then if I wanted to make sure of enough honey for Winter stores, I would use a queen-excluder between the stories from June 1 till Oct. 1, confining the queen below the excluder after June 1. With this management the season must be a worse one than the past, if the bees do not have enough honey for Winter. I am unable to explain the difference, but it is certainly remarkable. The same management will also give us the largest yields of comb-honey. 2. I say, yes.—G. L. Tinker.

1. In the hands of an expert, the 8-frame hive might be preferable, while for a farmer, the 10-frame might be more profitable. 2. If the super is of proper thickness, and of modern construction, no outer-cap will be necessary.—The Editor.

Topics of Interest.

Ohio State Bee-Keepers' Convention.

MISS DEMA BENNETT.

SECOND DAY—FEBRUARY 11.

AFTERNOON SESSION.

The subject of "Moving bees to catch the honey-flow" was to have led with an essay by H. R. Boardman, of East Townsend, O., but as neither Mr. Boardman nor his essay were present, the time was taken up in an informal discussion, no one present having had much experience in that line.

Dr. Mason said that he once moved 75 colonies to poor advantage.

E. R. Root—Moving bees is practiced in Germany to a considerable extent, by having house-apiaries on wheels.

The next on the programme was "Perforated zinc in extracting," by volunteers.

J. B. Hains—I run most of my bees for extracting, and I do not want any. I do not think that the bees work through it nearly as well.

E. E. Hasty—I would not like to try extracting honey in the upper story without zinc honey-boards, on account of brood.

J. B. Hains—I do not extract frames containing brood; leave the brood in the hive, and the last time around, exchange it for a frame below with honey only.

E. R. Root—I think that extracted-honey producers—especially large producers in California—are using it largely to great advantage. I do not think it any advantage in comb-honey.

W. Z. Hutchinson—What do you say to 5/32 all-wood honey-boards? I think the only objection is that the bees will go to plugging up the holes with hard wax. I often think I will have it chamfered down to a thin edge so that they will not chock them full of wax.

Dr. Mason—I shall use the wood-zinc honey-board next season. I know that it is a good thing.

D. B. Lovett—I have had some wood-zinc honey-boards pretty well filled with propolis.

Under the head of unfinished business the Secretary read a printed communication from the Secretary of the Missouri State Bee-Keepers' Association, asking us to take action in regard to adulterated honey.

F. A. Eaton—Do not keep agitating, or the public will think that there is a great deal on the market.

E. R. Root—I agree with Mr. Eaton on the subject.

Mr. Morris—What harm to the genuine bee-keeper would the report do that there was adulterated honey? That very idea gives me an opportunity to dispose of my honey.

Dr. Mason—The Secretary ought to be instructed to write to our Senators and Representatives in Congress, requesting them to use their influence in securing the passage of a bill preventing food adulteration, honey to be included in the bill.

The motion prevailed that the Secretary should write as recommended by the President.

In the matter of appointing delegates to the North American Bee-Keepers' Association, to be held in Albany, it was decided that those members present should be considered as delegates. If more than three, let them cast lots to see whom it should be.

The President named Chas. F. Muth, of Cincinnati, who is the President-elect, and J. B. Hains, of Bedford, to act in conjunction with himself as Legislative Committee.

H. H. Overmyer, Chairman of Committee on Statistics, reported:

Number of colonies, Spring of 1890.....	2,714
Number of colonies, Fall of 1890.......	3,127
Number of pounds of comb-honey......	23,253
Number of pounds of extracted-honey..	32,902
Nummber of pounds of beeswax........	905

The Question Box was then taken up, and some one wished to hear reports from those who have tried wide and thick top-bars to prevent brace-combs between top-bars and supers, or honey-board.

Dr. Mason—I have used a few to good advantage.

"What can be done with bees who kill their drones the first of June?

W. Z. Hutchinson—Feed them, if you want them.

"Give the best method of preventing swarms."

W. Z. Hutchinson—Give plenty of room, and extract the honey.

Mr. Morris—Catch the queen and cage her from 2 to 3 days, on top of the frames, and then return to the bees.

"Does the fertilization of the queen effect her drone progeny?"

H. H. Overmyer—Yes.

Dr. Mason—I think it does, or how do you get your hybrids?

E. E. Hasty—Birds show previous mating, sometimes, several years after.

The Committee on Resolutions reported, returning thanks to the railroads that the Central Traffic Association represents, for reduced rates, and to the proprietor of the Merchant's Hotel, for courtesies extended on this occasion.

At this juncture, J. Y. Detwiler, lately from New Smyrna, Fla., appeared in the open door, with smiling face, and bearing in his hand a stick, which he said was of black mangrove wood, from his old home in Florida.

The remarkable thing about this wood was that it was so heavy that it would not float upon the water, and, owing to its weight, would make a very serviceable cane. He presented it to the association, requesting that they, in turn, cause it to be presented as a memento of this occasion to his warm friend, Dr. Mason, who was about to retire from the Presidential chair.

E. E. Hasty being called upon to make the presentation speech, did so in his own happy, inimitable style, which was so easy, and so full of hearty good will. Although he had not a moment's time for preparation, he said just the right thing in a very few words. He said, in substance, looking first at the stick and then at the President:

"Doctor, I hold in my hand a piece of wood; I see that it is rough now, but I know that it may be made ornamental as well as useful; which is a suggestion that you, too, are a "diamond in the rough," and the more we get acquainted with you, the more we learn your good qualities, and love and appreciate you. I see, also, some dark spots or blemishes in it, showing that we are not without some faults, and that we all have blemishes. I observe that it is very heavy, indicative of merit—a quality not altogether lacking in our President."

He then handed the cane to Dr. Mason, assuring him of the good wishes of the association, which went with it, with the hope that in future years, when he should need support, that this part of a honey-producing tree should perform its duty faithfully, and be the comfort and support of his old age.

Dr. Mason responded in a feeling manner, saying that he appreciated the points that Mr. Hasty had made. He had been President of a great number of organizations, but he had never had anything occur that touched him as much as this token of appreciation and good will from this convention, and which he would receive and always hold in kind remembrance, adding: "I thank you most heartily, for I believe that it comes from you hearts."

A recess was taken for the purpose of making a collection to defray the expense of having the cane mounted. Messrs. Hains and Eaton, passing through the room, secured $5 for that purpose.

F. A. Eaton made a motion that a vote of thanks be tendered Mr. Detwiler for his happy thoughtfulness, and that he be made an honorary member of this association.

The motion was seconded by J. T. Calvert, and carried.

The President then made some suggestions to the members as to some points in the convention that might be improved upon: "Confine yourself to the subject." "Speak louder." "Do not hitch along, when speaking, as go-ah, get a good-ah, etc." "Do not sit back by the door, and talk among yourselves, but let the rest have the benefit of your conference." I thank you for the kindly consideration that has been manifested here, and hope that the meeting has been of profit to all of us.

The Secretary's report was then read.

At the request of Mr. Morris, the Doxology was sung, E. E. Hasty leading the singing.

The convention then adjourned to meet in Cincinnati, at the call of the Executive Committee.

Bedford, Ohio.

Removing Bees from Cellars, Etc.

MRS. L. HARRISON.

March changed places with a Winter month this year, and has been as cold, with more snow, than any other Winter month, completely ignoring the idea of Spring. Blue-birds and robins were reported in February in some localities, but failed to put in an appearance in our apiary, at least.

REMOVING BEES FROM THE CELLAR.

I hope that bee-keepers who put their colonies into cellars to pass the Winter, did not remove them early in March, thinking that Spring had come. A German bee-keeper called lately and inquired if I had taken the bees out of the cellar, saying that he thought that they must be removed every warm spell, in order to have a purifying flight. This was thought to be necessary in the early days of wintering in the cellar, but experience has proven that it is unnecessary, and highly injurious. If they have plenty to eat, are dry, warm and comfortable, all they ask is "to be let alone." The time to remove bees from the cellar, in any locality, is after the time when no more freezing weather may be expected.

One year many weak colonies of bees were destroyed by a frost on April 5, which also killed outright a pear tree that was in full bloom in our apiary.

One season, following a disastrous Winter which had destroyed many colonies all over the continent, I visited an apiary located at the foot of the Green Mountains, in Vermont, and was surprised to find the hives so very populous. The owner said there were some very fine days in March, and his neighbors put their bees out-of-doors, and when he took his out, his neighbors' bees were all dead, and when he put them upon the summer stands they were carrying in pollen in less than an hour's time. Dr. Miller says that he has never regretted putting bees out late in Spring, but has too early. During warm, sunny days in early Spring, I have often said: "I wish my bees in the cellar could enjoy it," and before another day I was saying: "How glad I am that my bees are in the cellar, away from the chilling blasts."

BEES UNEASY IN THE CELLAR.

If bees are uneasy and roaring, they are asking for something. Either the air is impure or cold, hot or dry, and their owner should interpret what is the matter. Sweep up the dead bees and open up the windows at night, changing the air. If that does not suffice, wet cloths and put them at the entrance, so they can take a drink.

SUB-EARTH VENTILATION.

The following is from the *American Bee-Keeper*:

> Some years ago the great West produced a Messiah—"sub-earth." I ridicule the sub-earth craze, which equaled the excitement of the Indians over their Messiah, and fooling with sub-earth "fixings" were equally as ridiculous in point of fact as the ghost dances.

The writer of the above lives in the State of New York, where the soil, air and walls of cellars differ materially from those in Central Illinois. The craze did not originate in the great West, but D. A. Jones, of Beeton, Ont,, was the father of it, as far as bees are concerned. If he does not need this "ghost dance," he is not compelled to have it, and I am not at all disturbed by his ridicule.

I have had a sub-earth ventilator in my own cellar for seven years, and the bees and I appreciate it more and more every year. The cellar is in a high, sandy soil, and has never had the least appearance of water in it; if anything, it is too dry. But before sub-earth ventilation was introduced, mold it would, and a sort of fungoid growth would spread over the walls. I swept, whitewashed, fumed and fretted, all to no purpose, and if a window was opened on the west and east, wash-tubs would leak like a riddle in a few days. Now, there are no moldy-cellar smells, and the air is as wholesome as any room in the house.—*Indiana Farmer.*

The Automatic Swarm Hiver.

H. ALLEY.

"A swarm of bees in May
Is worth a load of hay.
A swarm of bees in June
Is worth a silver spoon."

It is a well-known fact that bees will construct queen-cells and swarm from their hive with the desire to form another colony, when they become crowded for room. This condition of affairs comes on the latter part of May and June, generally during haying time—the busiest season of the year.

For years there has been no advancement over the old methods of hiving a swarm of bees, although several attempts have been made to improve them.

A swarm of bees will not leave the premises without their queen, and the queen being much larger than the worker bees, the inventor of the automatic swarmer has taken advantage of this provision in nature, and devised a wonderful invention that will successfully hive all swarms that issue, without the assistance of any person. In fact, the self-hiver is perfectly automatic, and needs no attention during the entire swarming season, only so far as to see that it is properly adjusted to the hives.

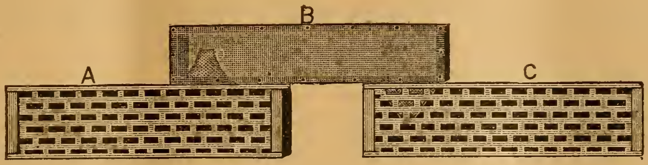
When a swarm issues in the old way, it will cluster in one mass on the limb of some tree or bush near by, and, unless given a hive soon, the bees will very likely go to the woods and be lost, or, as they very often do, skip to parts unknown without even saying *bon jour.* Thus, it is very important that we have an implement to insure the safe hiving of all our bees. The time and bees saved by using the self-hiver will doubly repay its cost the first season.

By referring to the accompanying cut, one will get a good idea of the self-hiving arrangement.

Boxes A and C are provided with metal having perforations so small that a queen cannot get through them. The workers, being so much smaller than the queen, can pass in and out with no hindrance whatever.

Box B is covered with wire cloth, and forms a passage-way from A to C, through the cone-tube at D.

The reader, of course, understands that box A is placed before the entrance of the hive from which a swarm is expected. Box C is placed before the entrance of the new hive, or the entrance of the hive the swarm is to occupy. The two hives are then connected by placing box B upon boxes A and C, as shown in the illustration, so as to form a continuous passage-way between the two hives. All outlets to the hives except those through the metal must be closed to prevent the queen from taking wing and joining the bees.



THE AUTOMATIC SWARM HIVER.

When a swarm issues, the queen is checked at the entrance of the hive by the excluding metal in box A. The worker bees have no difficulty in passing the perforations, and going into the air pell-mell, as they usually do when the swarm issues. But the queen, being much larger than the worker bees, cannot pass the metal to take wing and join the swarm, as they do when no self-hiver is used. When the bees find they have no queen with them, they at once return. In the meantime a few young bees have found their queen in box C, and all the bees of the returning swarm join her and enter the new hive, thus hiving themselves automatically.

If no more increase is desired, place box C onto box A, so as to form a trap at the entrance of the old hive. Then if a swarm should come off it would hive itself back from whence it came. At the end of the thirteenth day from the time of the first swarm, the swarmer should be removed from the entrance of the old hive, so as to allow the young queen a wedding flight. The old queen always goes with the first swarm. Do not look for swarming after the last of July, for there will be none.

Wenham, Mass.

Reminiscence of an Aged Bee-Keeper.

S. B. SMITH.

I have lived almost three score years and ten, and have handled bees nearly every year since I was 16 years old. At that age I worked for a man who kept bees, and when they swarmed I used to assist him in hiving them. After the first year, the bees and I became such good friends that I was trusted with the principal care of them, and did most of the hiving; also the taking off the surplus honey.

In those days the only hive I had any knowledge of was the old box-hive, but we improved on them by cutting two long slits in the top of the hive, and putting on boxes with glass in one side, so that we could see when they were full. They held from 10 to 12 pounds each. In this way we were quite successful in bee-keeping. We also had glass in the lower part of the hive, with a slide door that we could open and see the bees at work.

One day during the swarming season, a swarm came out, and went up very high, so that we could hardly see them, and then settled down and clustered in a bunch of raspberry bushes. They were very cross, and I had great trouble in hiving them. It was past 3 o'clock when they came out, and they did not stay long in the hive where I placed them, but came out and started for the woods.

I followed them about 1½ miles, and when they clustered again, I hived them and carried them back to the stand. They went to work the next day, and gathered a large amount of honey that season.

At another time a swarm started for the timber, and I followed them three-fourths of a mile, and saw them go into a tree. I cut the tree down, split it open, hived the bees, and carried them back to the stand. They filled the hive and cast a swarm that season.

As soon as circumstances would permit, I bought a colony of bees, and was very successful with them, for those old-fashioned times and ways of keeping bees.

In those days, I never used any protection when working among bees. I have hived many swarms with my sleeves rolled up to my elbows, having no protection to arms or face, and it was very seldom that I was stung.

Up to this time (1856), I had lived in New Hampshire, but that year I moved to Wabasha county, Minn. That part of the State was sparsely settled on account of its being a half-breed reservation, consequently, there were no bees in that section, but the honey-bee came with civilization.

I bought 2 colonies of Italians, in frame hives, for $10 each. These were the first frame hives, and the first Italian bees, that I had every seen. I purchased Quinby's book on bees, and made my hives according to his directions. I paid an enormous price for my bees, but did the best that I knew how to make them profitable, and succeeded beyond my expectations, for I made more on this investment than on any $20 that I ever spent.

Keeville, Minn.

Pollen Gathering by Queenless Colonies.

A. N. DRAPER.

The following letter is in reference to the article under the above heading, published on page 379:

I am just as much puzzled to know how you arrive at your conclusions, as you are to know how many of the noted authorities have arrived at theirs.

When I walk along in front of a line of bee-hives, and see one-third of the bees going into each hive loaded with pollen, except one hive, and into that hive not one bee in five hundred carrying any pollen, upon opening that hive, without exception, I find it queenless. Nearly every Spring I find from 2 to 6 queenless colonies, and one Spring I found 12 or 15, and I have never failed to discover them by this rule.

I was greatly interested in that article, notwithstanding your experience was so different from my own.

Marshalltown, Iowa. O. B. Barrows.

I find that bees that become queenless during the Winter, are so thoroughly discouraged that they carry in but very little, either of pollen or honey.

I generally examine every colony of bees I have, in March or April, and unite all the queenless colonies with weak colonies having queens. By reference to the article in question, you will find that I distinctly say, in the Summer time.

That I am not alone in my conclusions, the following extract, from a letter received, will show:

Your article on page 379, of the Bee Journal, is good. When the question was asked, I was surprised at the answers, but concluded that the "big guns" knew in which direction they were firing, and that I did not.

My experience in that direction is limited, but I have noticed that the hives containing an excess of pollen were either queenless, or had been so.

Sometimes, however, a colony in apparently a normal condition, will gather an undue amount of pollen. This, I believe, is owing to the fact that where there is no nectar to gather, the bees, otherwise idle, will pitch into the pollen. C. E. Yocom.

Sherman, Ills.

With a small brood-nest, nearly every bit of the surplus honey is taken off in June and July—here, in June, if I expect to keep sections clean and nice. If I should use a small hive, and take all the white honey off as surplus, the bees would starve during July or August.

Last year, the colony in my best large hive gave me 169 pounds, net, of extracted-honey. The colony in my Heddon hive gave *less* than 20 pounds. My average was 50 pounds per colony, Spring count.

During July and August the pollen nuisance is the worst, and it comes off corn-tassels and horse-weed. If there is plenty of honey surrounding the brood-nest, this pollen is converted into brood, which makes a colony valuable property during a good Spanish-needle yield, or for a clover yield the following Spring. Of course, there must be a vigorous queen in the hive.

It is the nature of the bee to store a surplus in time of plenty, and if you undertake to run a colony without complying with this fundamental principle, you upset the whole economy of the bee-hive.

The bees are not nearly as liable to store an excess of pollen in empty combs kept above the brood-nest, as in empty combs kept below it, and I doubt very much the advisability of keeping empty extracting-combs in the hives during July and August, in a locality like this. The purer, cleaner, and whiter the extracting combs are kept, the better. Never allow any pollen to be stored in them that you can avoid.

Upper Alton, Ills.

Texas Apicultural Notes.

A. C. ATEN.

These notes are for the benefit of Southern bee-keepers—especially those in Texas. To insure success, our management must often be different from what it is further north. Even in different localities in Texas, quite often, bees need different care.

In this part of Texas we have been having very cool weather for the last four weeks. The mercury went below the freezing point twice, but it was not cold enough to destroy the fruit. There were very few days that bees could gather pollen or honey. We had very little rain during this time, but to-day we had a splendid rain, and for the last few days it has been quite warm. Bees are very busy, and appear to be in fine condition.

I consider a ten-frame Langstroth hive the best for Texas. I would never contract the brood-chamber, but give them plenty of room. I usually have nine frames in the brood-chamber.

I never have less than two stories for a full colony, and quite often three. In the upper stories I generally have only eight frames, so there is very little brood reared in them.

By giving the bees plenty of room I, in a great measure, prevent swarming. Last year only one swarm was cast from over 160 colonies, Spring count, and that, too, when I got nearly 60 pounds of honey, on an average, per colony. There is generally a honey flow all Summer and Fall, but seldom what might be called a boom, so it is necessary to have plenty of bees all the time, and by this management I get them.

If there is foul-brood in Texas, as is claimed by one of your correspondents, there should be some legislation on the subject; and the sooner the better.

The writer of these notes kept bees 35 years ago, in Peoria county, Ills., and sold comb-honey in the Peoria market very readily at 25 cents per pound. I recollect very well seeing Mrs. Harrison at her father's house, in Peoria, when she and I were many years younger than we are now.

G. W. Demaree, on page 314, speaks of fermented honey. I have had some of that here—just such as he describes. I always supposed it was caused by the bees not being able to ripen it soon enough after it was gathered, and, owing either to the weather, or some other cause, it soured a little before the water was evaporated. Sometimes, after being capped, it breaks the cappings and, of course, has a bad taste, and should not be put with the good honey. I have never had very much such honey in any one year.

Bees gather very little pollen and no honey from rag-weed here, but it is indeed a pest. The roots of our rag-weed live all Winter, but when we kill the root we generally get rid of it, and it does not trouble us as much as it does further north.

To A. N. Draper, in regard to pollen gathering by queenless colonies, I would say that the reason they appear to gather more than colonies in good condition, is that they use none of it up in brood-rearing, and it accumulates.

To get rid of a drone-laying queen, or fertile worker, shake all the bees off the frames, and out of the hive, at least a rod away, and the queen, or the fertile worker, will not find the way back, but all the workers will, and then you can introduce a queen, or get them to rear one of their own.

Round Rock, Tex., March 24, 1891.

Bounty for Honey, Etc.

BYRON IIAMS.

Our bees are tumbling over each other in their rush to-day, and seem to be bringing in considerable honey with the pollen. I have heard of no Winter loss, worthy of mention, in this vicinity. Clover seems to be in very fair condition. Fruit is all right so far, and if we have no severely cold weather, our bees will have a good start on fruit bloom.

Would it not be well for all bee-keepers to write to their United States Senators and Representatives, and urge upon them the necessity of giving us a bounty of 2 cents on our honey? We surely have as much right to a bounty as the New England "sap boilers." How would it do for bee-keepers to send in $1 or more, each, to become members of the Union, and use a part of the fund in looking after our interests at Washington, in the way of a bounty on honey. All bee-keepers should, and, doubtless, would "shell out the shekels" when they could see a reasonably sure return for their investment.

Now is the time to get your supplies, if you have not already done so. Do not wait until your earliest and best swarms start for the woods, and your honey flow is half over, before you think of getting your hives and sections ready.

If your bees are out-doors now, close up the entrance so that the bees will have just room to pass in and out without crowding. See that there are no openings at the top of the hive, to allow cool draughts of air to pass up through the bees.

It is very necessary to have your bees fixed up just as snug and warm as possible at this time of the year, if you would have a large working force for the clover.

Worcester, Mo., March 22, 1891.

[The National Bee-Keepers' Union is an organization created to defend bee-keepers when their rights are assailed. To allow it to "lobby" for bounties, or prosecute adulterators, it must first alter its constitution and laws, and that will require a majority vote of all its members. Until then, it will be useless to expect it to do anything more than to defend bee-keepers in their lawful rights and privileges.—Ed.]

* * *

Why Bees are Restless in Winter.

REV. STEPHEN ROESE.

Rest is the condition of life for the honey-bee during Winter. Temperature in harmony with the nature of the bees, will be like sweet repose, after long and hard labor, to man. Such conditions should be maintained in the bee-house or cellar, until the opening of the season, to keep the colonies healthy and strong, and prevent diarrhea and Spring dwindling.

All unnecessary tinkering, and noise, in and about the bee-house or cellar, should be carefully avoided by the bee-keeper, if the future prosperity of his apiary is his sole object. Arousing a colony of bees from its state of slumber and sweet repose, too often means death in the end, for it is the nature of the bee, whenever aroused to activity, to fill itself with honey, and, having no opportunity for a cleansing flight, the intestines become filled with accumulated fæces, which, if too long retained, will form a sort of mucus, which condition in a cool, damp atmosphere, will result in diarrhea.

Therefore, if colonies, during the Winter months, manifest restlessness, running and buzzing about the entrance, as if in search of something, and finally flying off to perish on the floor, there is no question but that something is wrong, for a bee will not leave the cluster at the risk of her life while all is well, for life is as precious to the bee as to man.

This restless condition of a colony is ample proof that something is amiss in the hive, and unless the proper remedy is applied, the bees, one by one, will leave the hive and perish, and the result will be that, at the opening of the season, there will not be enough bees left to protect the brood and care for the young, and Spring dwindling will result, which has taught many bee-keepers a lesson they will not soon forget.

Beginners, and the inexperienced, are not always aware of the cause of such restlessness among their colonies during the Winter months, and experienced bee-keepers cannot write too much, nor too often on this topic, for the proverb, "a stitch in time saves nine," is here very thoroughly exemplified, and the writer is not too proud to acknowledge it to have been a fact in his own case, when a novice in apiculture, that timely hints and advice from those who were not averse to imparting instruction, saved him many dollars.

These questions now arise: What is the cause of restlessness among bees during the long Winter months, and, How can we relieve their wants, and keep them safely until Spring? They are questions that have puzzled many minds for years, and baffled the skill of the most experienced apiarists, and still the problem is unsolved.

First, low temperature is very injurious to bees, for they are natives of a warm climate, and warmth is the essential life-element of the colony, and without it they cannot exist. This fact should be borne in mind by every bee-keeper in the land, and yet there are many who claim that the cooler the atmosphere, the more quiet the bees will remain. This has proved too true with many who cruelly left their bees unprotected on the summer stands, the result being that they remained quiet forever, with a hive full of honey.

Moderate cold will not injure bees; especially, if well provided with stores on each side of the cluster, and a few empty frames in the center for them to cluster upon and keep warm, with Hill's device overhead, a woolen blanket covering next to packing of forest leaves, fine shavings or chaff, and, if inside a repository, the hive raised ⅜ of an inch from the bottom-board. Bees thus cared for will not suffer from cold nor dampness, and will not run restlessly to and fro, buzzing about the entrance until life is extinct.

Warmth is essential to the life of the honey-bee, and without it, it cannot exist. If the immediate surroundings, or repository, does not furnish it, artificial means must be resorted to (Pastor Weigandt, of Flacht, Germany, is not far from the mark in advocating such); otherwise, the bees themselves will be compelled to create the essential degree of warmth for their comfort, by consuming more honey, which will create a higher temperature in the hive.

But as artificial heat is created by means of fuel, be it coal or wood, a refuse is left (ashes), so with the honey-bee. According to the consumption of honey, the intestines will become filled with the refuse matter (fæces); and if no cleansing flight can be had, the over-filled intestines will cause swelling of the abdomen, and result in diarrhea, the effects of which many bee-keepers have experienced to their sorrow.

No bee-keeper should allow the least sign of diarrhea to remain in hives or frames for present use, nor in bee-houses or cellars, for the disease will prove contagious the following season, unless the germs are destroyed by scrubbing with strong soap-suds, or by fumigating.

It is the duty of every bee-keeper to provide agreeable repositories for his bees, frost-proof and dry, with temperature not below 35° or 40° above zero, nor higher than 50° at any time, as in either case, by the excessive consumption of honey, there will be danger—in the higher temperature too-early breeding will be encouraged, which in most cases, will prove fatal.

Another cause of restlessness in the hive, is the want of pure air. Much has been said and written on this subject, many bee-keepers claiming that fresh air is not essental for bees in winter quarters. The fallacy of such argument is patent to all, as animal life cannot exist in a healthful state without pure air, any more than vegetable life can. Each bee-house or cellar should be supplied with ventilators sufficient to supply pure and carry off foul air.

Last, but not least, another cause of restlessness among bees, is the lack of water. A colony in need of water will sometimes act as though mad, for thirst, in all cases, is more painful than hunger. Some colonies are affected more than others in this respect, owing to the condition and quality of the honey in the hive. Bees wintering on buckwheat honey will rarely be affected with thirst, for it contains more moisture, and is thinner than other honey, and will keep longer in the liquid state.

Should honey become granulated in the hive, the bees will be in search of water, and quite frequently the bottom-board of such hives will be covered with granulated honey. A sponge or rag, saturated with water and placed at the entrance, or on top of the frames, will, in most cases, give rest and quiet to the bees.

Maiden Rock, Wis.

Spring Management of Bees.

WM. C. WOLCOTT.

A letter from Mr. L. C. Iaessing, of Maumee, Lucas county, Ohio, requests me to explain in the AMERICAN BEE JOURNAL, my method of managing bees in 10-frame Langstroth hives, during the Spring, and until after swarming time. It should have been answered sooner, but I have been absent from home for three weeks.

I take my bees out of the cellar when it is warm enough for them to fly well. After they have taken their first flight, I examine them, clean out the hives, and see if the queens are all right, at the same time taking out the drone combs from all the colonies from which I do not wish to rear drones, uncapping them (thus shaving off their heads), and putting the frames back in the hives, and the next morning the drones are all lying on the ground, the bees having carried them out. The empty drone combs I put in the upper stories for extracting. In that way I reduce the drones greatly, and save the honey they would eat.

The supers that I use for comb-honey are made from ⅞-inch lumber, the same size as the top of the hive, the sides and ends being 4½ inches wide, for one-pound sections.

I do not put anything between the brood-chamber and the supers, and put in 4 rows, 7 sections in a row, making 28 in all. Then I take fine wire and stretch across the narrow way, two wires for each row of sections, and use staples, such as are used in window blinds, to fasten them. I do not use division-boards at all, and in hiving swarms I do not contract the brood-chamber.

I make my own foundation, and when I have plenty of it I put in full sheets; if not, I cut them lengthwise, and put in half a sheet. I have never used queen-excluders, but have some now, to use in the hives that I extract from. Have never extracted any from the brood-nest.

When the honey-flow is good, and I have large swarms, I put on the sections after the bees have been in the hives 3 or 4 days, filling the hives with empty combs or comb-foundation.

My hives are all painted and numbered, and I have a book containing the numbers. About Sept. 20, I remove the caps from the hives, and weigh every one, writing down the weight opposite the number in the book. From the colonies having more honey than I think they need, I remove 1 or 2 frames, which I give to colonies that have not enough to carry them through the Winter.

Bees have given me a great deal of trouble by visiting my well and watering trough, and in a dry time they would go a mile and a half to my neighbors' watering troughs, but last Spring, when I put my bees out, I made a trough that would hold 5 or 6 pails of water, filling it nearly full of corn cobs, then filled it up with water, and three times a week I put in a handful of salt, and neither I nor my neighbors, were troubled with bees around the watering trough all season.

Eldorado, Wis., March 16, 1891.

Removing Bees to Oklahoma.

H. B. FURBER.

I formerly lived in Dallas county, Texas, and kept about 30 colonies of bees, but concluded to move to Oklahoma, and wished to bring a few of my best colonies with me, so I bought some wire-cloth, and cut it about one inch larger than the bottom of the hive, so that it would turn up all around, and fastened it by tacking a strip on the edge of the wire.

I prepared 5 colonies in this way, and put them in a hack and hauled them five miles to the railroad station, loading them into a freight car with my other goods—such as farm implements and household goods—and some fine hogs and poultry. They were on the cars five days (the distance is only about 200 miles), being loaded on Dec. 1, and unloaded Dec. 6, remaining as they were shipped until Jan. 5, when I removed the wire-cloth, and found about a pint of dead bees under each hive.

They had a good flight the evening of Jan. 5, so I left them in a yard in Norman until the 5th of this month, when I put the wire-cloth on them again, placed them in a two-horse wagon, on some hay, and hauled them 12 miles, over pretty rough roads.

On the 13th I removed the wire and placed them where I wished them to remain during the Summer. Three days later, I examined them, and found them all in good condition, with plenty of stores and brood.

They have been bringing in pollen every few days since I opened them. I think this will be a good country for bees. The Indians say there are great numbers of them in the timber. I am on Little River, 12 miles east of Norman.

Norman, O. T., March 23, 1891.

Queen-Excluder vs. Queen Includer.

A. C. STICKLE.

Although a great deal is being published about perforated zinc, wood, and other material for queen-excluders, my present intention is not to discuss the utility of queen-excluders, but to suggest an opposite, or different application of the principle.

Suppose a Langstroth hive were made as at present, but in place of the present front-board and entrance, a queen-excluder were placed, as sometimes at present, and in front of this, were an additional foot or more in length of hive, filled with sections with another front-board and entrance unobstructed.

Now, in such a hive the bees could deposit their stores in the sections without entering the hive proper, or could go on into the hive through the perforated division; while the queen could not go from the brood-chamber, which might be made two stories high.

In such an arrangement the bees would not consume much time, as it is claimed they do, in crawling through the narrow slots of the queen-excluder; nor could the queen enter the sections. If swarming is to some extent caused by the crowding of the bees, this arrangement would relieve the pressure, and its utility might extend in other directions. In short, the queen-excluder becomes a queen-includer.

Has this principle ever been tried in just this manner? And if so, what has been the result? I write to find out any record in the matter, so as not to go over the experimental failures already proved by others. You edit a periodical at all times fully up to the knowledge obtainable, and hence you can easily post me in this matter.

Anamosa, Iowa.

[Perhaps the nearest to the idea presented above is the "queen-restrictor" invented by C. W. Dayton, which is fully described on gage 790 of the Bee Journal for 1890. It is a queen-includer, by confining the queen upon several frames to fill them with brood, leaving the other combs to be filled with honey by the workers.—Ed.]

Keeping an Account with Bees, Etc.

J. A. MARSH.

The season of 1890 was a failure in Crawford county, and bees will be in demand the coming Spring.

The moss-back, box-hive man is about weeded out. He went after the honey, and helped himself freely, last June—carved everything out, down to the cross-sticks—and the poor bees starved.

We have had three poor seasons in succession, and the last one was about as bad as it could be. Still, I do not feel discouraged, because, looking over my account with the bees, I find that I began April 1, 1888, with one colony, which increased to three, and gave me 100 pounds of honey.

In 1889, they increased to 13 colonies, and gave me 195 pounds of honey, and owed me on May 12, 1890, $34.40, cash, which had been expended for tools, hives, lumber, sections, etc. Have given them no credit for honey used on my own table since last date, because I wanted pay for time and attention.

They now owe me $2.85, and I have on hand $30 worth of tools, nails, lumber, hives, foundation, etc., honey enough to last till the new crop is gathered, and a few pounds to spare, besides 20 out of 24 colonies strong in bees, and heavy with stores.

To be sure, I do not make this showing through the sale of honey alone. Now, if a good season comes I will surely profit a little through the sale of honey.

TRADE-MARK.

What is the use of a trade-mark? Why not pass laws to make consumers take our honey whether it is watery, sour, bitter, yellow or white? A man's name and reputation should be his trade-mark. I should bitterly oppose the use of my trade-mark by some people I have known.

DETECTING QUEENLESSNESS.

Dr. Miller seems inclined to reconsider the question of detecting queenlessness. I am only a beginner. Have had three cases, and discovered each from outside demonstrations before the bees had been in that condition more than 3 or 4 days. I hope the Doctor will gain courage in his convictions.

A. I. Root might explain Brother Doolittle's experience by saying that the bees remembered how the big queen-breeder had been taking their queens away for the last 20 years, but, always being kind enough to replace them with queen-cells, the bees are not greatly alarmed at their loss, knowing the good intentions of their master by the way he had treated their ancestors.

ABSORBENT PACKING.

I notice that the absorbent man is not dead yet. He would have beginners believe that it is good to have packing over the bees which has affinity for the moisture arising from the cluster, absorbing it, and thereby keeping the air dry. He should be put to bed on a Winter night, under a wet blanket. As long as he could not raise heat enough to keep the blanket from freezing, he would be comparatively comfortable, but if the weather moderated, or he generated too much heat, the cold water would begin to trickle down upon him. Then imagine his condition.

I should prefer no packing. Why not put enameled cloth over the frames, and the packing on top of that? Then, the moisture would pass out at the open entrance, and be absorbed by all out-doors, where it can do the bees no harm.

Scotia, Mo.

Progressive Knowledge.

Some one says: At ten years of age a boy thinks his father knows a great deal, at fifteen he knows as much as his father, at twenty he knows twice as much, at thirty he is willing to take his advice, at forty he begins to think his father knows something after all; at fifty he begins to seek his advice, and at sixty—after his father is dead—he thinks he was the smartest man that ever lived.—*Exchange.*

Clubs of 5 New Subscriptions for $4.00, to any addresses. Ten for $7.50.

CONVENTION DIRECTORY.

Time and place of meeting.

1891.
May 6.—Central Michigan, at Lansing, Mich.
W. A. Barnes, Sec., Lansing, Mich.

May 6.—Bee-Keepers' Ass'n and Fair, at Ionia, Mich.
Open to all. Harmon Smith, Sec., Ionia, Mich.

May 7.—Susquehanna County, at Montrose, Pa.
H. M. Seeley, Sec., Harford, Pa.

June 2.—Des Moines County, at Burlington, Iowa.
John Nau, Sec., Middletown, Iowa.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—The Editor.

North American Bee-Keepers' Association

President—P. H. Elwood....Starkville, N. Y.
Secretary—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

President—James Heddon ..Dowagiac, Mich.
Sec'y and Manager—T. G. Newman, Chicago.

Bee and Honey Gossip.

Bees in Southeastern Kansas.

Bees did very poorly here last season, on account of the drouth. My pa says there are a great many bees in this part of the State, but that they are poorly cared for, being kept in old box-hives, and scattered all over the yards, and he thinks that a great many of them have died this Winter, judging from the way the hives are turned over in places. I lost my colony of bees during the recent cold weather, but I shall try to get another colony. Mattie Roby.

Chanute, Kans., March 21, 1891.

Past and Future Bee-Keeping.

Sixty or seventy years ago bee-keeping was given very little attention. Bees were hived in log gums, or any receptacle that happened to be at hand when a swarm issued—in fact, it did not make much difference if they took "French leave," for the woods were full of wild bees, and honey was plentiful and cheap. My grandfather frequently found bee-trees yielding large amounts of honey. I remember hearing him tell of finding a large bee-tree that had baffled his skill for quite a while. One day he went out for his usual sport, when a shower of rain came on, and he took shelter under a stump of a tree (that had been broken off, and was thickly covered with vines), and to his surprise backed right in on the bees, for it was very warm weather, and they were hanging out. The tree was undoubtedly a very old one, for the honey in the bottom was candied, and of a very dark color. But what wonderful improvements have been made in our beloved industry since the time of our ancestors! We owe Father Langstroth a debt of gratitude which we can never pay, for the invention of the movable-frame hive. Then we have the honey and wax-extractors, queen and drone-traps, bee-smoker, section honey boxes, bee-escape, queen-cages for shipping bees, and many more useful articles, nearly all of which have been invented within the last few years. But we are going to have better hives, better bees, and better methods of management, in the near future, and much of the labor now performed by man, will be done by the bees. I think the time is not far distant when the bees will hive themselves, and the apiarist can go to church, or visit his friends, instead of being compelled to remain at home to take care of swarms. S. G. Kilgore.

London, Ohio.

Bees in "Egypt."

Bees did well, in this vicinty, last Fall. At the opening of the season, I had 6 colonies; I purchased 2 colonies, and they increased to 23, besides 2 or 3 swarms which went to the woods. My surplus amounted to about 250 pounds of comb-honey. I bought 20 colonies more, and now have 43 colonies. I have had experience with bees, from the log-hive to the movable-frame hive, and handle them both with and without veils and gloves, but must say that when I have no veil I sometimes have to pick out stingers, and reduce swellings.

Carmi, Ills. Elias Robinson.

Grocers Sent for His Honey.

My bee-house is 20 feet by 10 feet 10 inches, walls packed with dry sawdust, door in each end, and one window, with shutter, sash, and screen. Of my bees, 20 colonies remain in the house Winter and Summer, flying in and out at will. The other 20 colonies are piled up in the house, with natural gas to keep the temperature above freezing. I used the Langstroth frame for many years, and have some of them yet, not so long, but deeper. Frames 12x15, nine in each hive, make my supers 13½x16. I had 36 colonies last Spring, and 25 of them in hives of the above size, gave me 1,000 pounds of honey; 5 colonies in hives ⅓ larger—2,800 cubic inches—gave me 60 pounds per colony. Did not feed the large colonies any last Spring, but had to feed the small ones. My 30 colonies gave me 1,300 pounds last season; net profit 80 to 90 per cent. Each pound was worth 20 cents at my own door, as grocers sent for it, as they needed it.

Muncie, Ind. Robert Meeks.

Loss from Diarrhea.

As near as I can determine now, the loss on my bees will be about 12 or 15 per cent., the cause of the loss being diarrhea; but why should some of the colonies be effected and the remainder be free from it, all having received the same care and management? Two or three colonies that were fed on sugar syrup exclusively, are wintering better than those fed on natural stores.

C. P. McKinnon.

Bangor, Iowa, March 27, 1891.

Lost Through Misfortune.

As I was confined to my bed the greater part of last season, with a broken leg, I could not do justice to the few colonies left me after so severe a Winter loss. I bought 6 colonies before I broke my limb, and while lying on my back saw my best swarms going to the woods, for lack of some one to hive them. As soon as I was able to creep out, I saved many swarms, and labored hard for extracted-honey. By purchasing queens, and bees by the pound, I increased my colonies to 38, and extracted 900 pounds of marketable honey, although the honey yield was very poor in this locality. I was careful to allow them sufficient stores for Winter, and left them on the summer stands until Dec. 17, when I placed 9 swarms on the south side of my honey-house, packed in dry sawdust, and sheltered from east and west winds, and the remainder I put in the bee-house, the floor of which had been strewn with dry sawdust about an inch deep, to aborb the moisture, and prevent the sound of footsteps when walking through the house to examine the hives, which I do about every two weeks. The general expectation in this vicinity is for a good crop the coming season. Stephen Roese.

Maiden Rock, Wis.

Clover-Hay Worm.

Prof. Cook:—Enclosed you will find a specimen of a little worm, that I found in the bottom of a stack of clover, together with the cocoon in which it remains until disturbed, when it crawls out. The stack, for about 3 feet from the ground, was infested with these cocoons to such an extent that the hay looked white. These grubs were alive all Winter, and are alive still. I have never seen or heard of such before. Are they of common occurrence? Would such hay be dangerous to cattle fed upon it? Please answer through the American Bee Journal.

P. D. Wallace.

Richland Centre, Wis., Mar. 28, 1891.

[This is the clover-hay worm. The moth lays the eggs in Summer, the larvæ eat in Fall, Winter and Spring. Of course, they injure the hay not a little, but I have never heard of their doing any damage to stock that might eat them. I should have no fear. The best remedy is prevention. Do not keep clover hay over, either in mow or stack, till the second year.—A. J. Cook.]

Colony of Bees Found Dead.

One colony of my bees died recently. I have but a few colonies, and have wintered them in my cellar. The cellar is very dry, and well ventilated. I had my bees on a long bench, and have examined them often during the Winter, as I could do so without disturbing them by placing my ear against the side of the hive. I examined them about a week ago, and found all my colonies alive. I leave the upper story on my hives, but raise the board over the frames for ventilation. When I put my bees into winter quarters I considered the colony that is dead my second best. They troubled me by coming out of the hive, the first of the Winter, so I was obliged to put a screen over the entrance. As soon as I found they were dead, I removed the hive from the cellar. There were plenty of bees—in fact, it was a strong colony—and they had honey enough left to winter another colony. It was very white and thick, almost like wax, and of very fine flavor. The inside of the hive was a very little damp, and the lower part of the comb a little moldy. When I opened the hive, there was a very strong disagreeable smell, almost sickening, and the comb was more or less covered with excrement. I have read a great deal about foul-brood, but never saw any, and do not know as I should know it if I should see it, but the brood-comb in this hive had a number of cells that were capped, and on opening them, I found some had dead bees all dried up, while others had decayed bees that were nearly full grown. There was some uncapped honey that had candied, and it was in that part of the comb where there were the largest number of bees. A large amount of bees had dropped onto the bottom-board, but the entrance was not closed up so as to prevent a free circulation of air. I have examined my other colonies, and find but few dead bees, and the colonies seem to be very strong and healthy. I have tried to describe very minutely the condition in which I found everything in the hive of dead bees, and now I wish some correspondent to tell me, through the BEE JOURNAL, what was the cause of the bees dying. S. B. SMITH.

Keeville, Minn.

Wants No Section Press.

I see there is considerable discussion about dampening sections, and using a press to put them together with. I never dampen my sections, and break but very few, and use no press to put them together. I have put up 100 sections, and filled them with foundation, in 11 minutes, and did the work well.

A. D. BURTCH.

Stockbridge, Wis., March 31, 1891.

Splendid Bee Pasture.

My home, in Rockingham county, is in the midst of the blue grass region of the great valley of Virginia. There are thousands of acres of this kind of grass within the flight of my bees, in which white clover grows so thick that it almost makes the fields white, and when this bloom secretes nectar well, all the bees in the country cannot gather half of the honey produced by it. I also have hundreds of yellow willow, locust and poplar trees, and when all things are right, it is no trouble for bees to gather honey. I have had colonies to gather as much as 125 pounds without any artificial means. I have 60 colonies, and they have averaged 52 pounds of comb-honey to the colony. Have sold honey at 20 cents per pound, but cannot always get this price. Sold last year's crop for 15 cents, here at home. One of the curiosities of my apiary is a colony—in an old-fashioned bee-hive that will be 51 years old next Summer—which has been in this hive ever since it has been in existence, and has done exceedingly well, generally swarming well, and making about 25 pounds of honey per year—sometimes twice as much. This hive contains what I call the Queen of Rosendale. Her name and fame has been spread all over the United States, in different papers, and you may have seen her name mentioned yourself. She is a black, or old native bee. I have several kinds of bees, and think it is a good plan to have the different races to cross the blood. This gives strength and energy, industry and prosperity. GEO. W. ROSENBERGER.

New Market, Va.

Foul-Brood and Movable-Frame Hives.

Dr. Tinker's article, on page 314, and W. P. Faylor's, on page 346, regarding the origin of foul-brood, are quite correct. I have been consulting some old books, in search of information on this point, but so far, I have found nothing concerning foul-brood, and I have concluded that the disease had its origin, or first made its appearance, at the time of the introduction of the movable-frame hive, about 1853. It is caused by spacing brood-frames, and single-walled hives, combined with ignorance and thoughtlessness on the part of the bee-keeper who knows nothing of the habits or requirements of the honey-bee. E. L. Pratt cures by cremation—that is right, but why not go further, and spray the brain of the thoughtless bee-keeper with a solution of muriate of potash.

Buffalo, N. Y. J. W. TEFFT.

Home Market for Honey.

My bees are still in the cellar, and some of them need a flight badly, but the weather is cold and gloomy. My crop of honey, last year, was about 900 pounds, in sections, which I sold in my home market. I shall get an extractor, and run about one-third of my colonies for extracted-honey this season. I would like to see a bee-keepers' association started in this place. Let all who would like to attend one soon, speak out. Do not be bashful. The atlas is received, and I am very much pleased with it. It is well worth the money. A slight mistake is made in regard to the adjustable clamp that I sent you. It is all iron, not "iron and wood," and it does not form an end to the hive, as I am made to say on page 374. I have made two other clamps—one adjustable, the other not—the clamping device is in them, just as good as in the one I sent you; the main difference is that they can be made very cheap. GEO. T. GUNN.

Wall Lake, Iowa, April 1, 1891.

[The description was printed as written. If incorrect, it was chargeable to Mr. Gunn, and not to the printer.—ED.]

Syrian Bees are Good Enough.

My bees are in good condition, and are gathering honey and pollen from the peach trees, and prospects for a good honey crop this year are excellent. White clover is plentiful, and we have poplar, sourwood, apple, blackberry, locust, persimmon, yellow wood, Indian yellow top, river weeds, stick weeds, and, occasionally, honey-dew. The stick weed is last in the Fall, and is our best honey plant, the honey from it being clear, of good flavor, and it granulates as soon as cold weather begins, if extracted, but in the comb it does not. My bees are Syrians, and while they are good honey-gatherers, I do not think they are better than other races, but are good enough. Black bees, in this vicinity, do not pay for their keeping, and if their owners desire any surplus honey, or increase, my advice is to change the stock as soon as possible. The weather is growing warm, the mercury standing at 60°. Our coldest weather last Winter, was 18° above zero. I wish to make a correction in my letter, on page 359. It should read, "one swarm issued on June 10," instead of "filled the frames on June 10." A. C. BABB.

Greenville, Tenn., March 30, 1891.

[The error is owing entirely to the crude manner of constructing the sentence, and the utter lack of capital letters and punctuation marks.—ED.]

Spraying Fruit Trees with Poison.

I have just returned from Texas, and in looking over the back numbers of the BEE JOURNAL, I find what seems to me something that will prove the death knell to the bee-business, and that in a short time. I allude to the spraying of fruit bloom. That will surely kill all the bees in reach, every time. Cannot this be prevented by prompt action on the part of the Legislature? Surely, every bee-keeper stands ready to pay his proportion of any expense the Union may incur in this direction. I, for one, feel greatly alarmed, as the craze seems to have taken hold of this neighborhood. It can only be prevented by law, and unless action is taken at once, it will result in incalculable damage. It is so late now, that it will be almost impossible to enact a law in time for the coming Spring. The poison will also kill off the bumble-bees, and thereby result in great damage to red clover. E. SANDFORD.

Nokomis, Ills.

[Such a law is now before the Legislature, and its full text may be found on page 473.—ED.]

CLUBBING LIST.

We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

	Price of both.	*Club.*
The American Bee Journal	$1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Guide	1 50	1 40
Bee-Keepers' Review	2 00	1 75
The Apiculturist	1 75	1 65
Canadian Bee Journal	1 75	1 65
American Bee-Keeper	1 50	1 40
The 7 above-named papers	6 00	5 00
and Langstroth Revised (Dadant)	3 00	2 75
Cook's Manual (1887 edition)	2 25	2 00
Quinby's New Bee-Keeping	2 50	2 25
Doolittle on Queen-Rearing	2 00	1 75
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 60	1 50
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	2 20
Western World Guide	1 50	1 30
Heddon's book, "Success,"	1 50	1 40
A Year Among the Bees	1 50	1 35
Convention Hand-Book	1 50	1 30
Weekly Inter-Ocean	2 00	1 75
Toronto Globe (weekly)	2 00	1 70
History of National Society	1 50	1 25
American Poultry Journal	2 25	1 50
The Lever (Temperance)	2 00	1 75
Orange Judd Farmer	2 00	1 65
Farm, Field and Stockman	2 00	1 65
Prairie Farmer	2 00	1 65
Illustrated Home Journal	1 50	1 35
American Garden	2 50	2 00
Rural New Yorker	2 50	2 00
Nebraska Bee-Keeper	1 50	1 35

Do not send to us for sample copies of any other papers. Send for such to the publishers of the papers you want.

Supply Dealers should write to us for wholesale terms and cut for Hastings' Perfection Feeders.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

ADVERTISING RATES.

20 cents per line of Space, each insertion.

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A line of this type will admit about eight words. ONE INCH will contain TWELVE lines.

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☞ On larger Advertisements discounts will be stated, on application.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

☞ Subscribers who do not receive their papers promptly, should notify us at once.

☞ Send us *one new* subscription, with $1.00, and we will present you with a nice Pocket Dictionary.

☞ The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to pay for another year.

☞ Systematic work in the Apiary will pay. Use the Apiary Register. It costs:

For	50 colonies (120 pages)	$1 00
"	100 colonies (220 pages)	1 25
"	200 colonies (420 pages)	1 50

☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

The Convention Hand-Book is very convenient at Bee-Conventions. It contains a simple Manual of Parliamentary Law and Rules of Order for Local Bee-Conventions; Constitution and By-Laws for a Local Society; Programme for a Convention, with Subjects for Discussion. In addition to this, there are about 50 blank pages, to make notes upon, or to write out questions, as they may come to mind. They are nicely bound in cloth, and are of the right size for the pocket. We will present a copy for one new subscription to the BEE JOURNAL (with $1.00 to pay for the same), or 2 subscribers to the HOME JOURNAL may be sent instead of one for the BEE JOURNAL.

◆

The "Farm Poultry" is a 20-page monthly, published in Boston, at 50 cents per year. It is issued with a colored cover and is finely illustrated throughout.

We have arranged to club the AMERICAN BEE JOURNAL with the *Farm-Poultry* at $1.35 per year for the two. Or with the ILLUSTRATED HOME JOURNAL at $1.75.

◆

If you have a desire to know how to have Queens fertilized in upper stories, while the old Queen is still laying below—how you may *safely introduce* any Queen, at any time of the year when bees can fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact, everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and is as interesting as a story. Price, $1.00. For sale at this office.

◆

When talking about Bees to your friend or neighbor, you will oblige us by commending the BEE JOURNAL to him, and taking his subscription to send with your renewal. For this work we will present you with a copy of the Convention Hand-Book, by mail, postpaid. It sells at 50 cents.

◆

We Now Have a full stock of everything needed in the apiary, and can fill orders at a moment's notice. Order before the rush.

HONEY AND BEESWAX MARKET.

DETROIT, April 4.—Comb-honey is quoted at 15@16c; demand light. Extracted, 7@8c. Beeswax in fair demand, 28@29c.
M. H. HUNT, Bell Branch, Mich.

NEW YORK, April 4.—Market is bare of comb-honey. We quote: Extracted, buckwheat, 7@7½c; California, in good demand, at 6¾@7¼c, and market well supplied; Southern, none in market. Beeswax, 25@27c.
HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

KANSAS CITY, April 6.—Market continues about the same; stocks becoming light; no receipts. We quote: White 1-lb. comb, at 16@18c; dark, 12@13c; California white, 2-lb., 4@15c; extracted, 6@7c. Beeswax, 22@25c.
CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CINCINNATI, April 6.—Demand good for extracted-honey, at 6@8c; comb-honey in fair demand at 15@17c for choice, in a jobbing way. Beeswax is in good demand at 24@26c., for good to choice yellow.
C. F. MUTH & SON,
Corner Freeman & Central Aves.

CHICAGO, April 6.—Demand at present not very active on comb honey. Fancy white, 17c; white, 16c; white, 2-lb. sections, 14c; buckwheat, 1-lb. sections, 12c; extracted, 7@8c. Beeswax, 28c.
S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, April 6.—Fancy white 1-lb. comb, 18c; fair to good, 17c; dark 1-lb., 14@15c; 2-lb. white comb, 15@16c; 2-lb. dark, 13@14c; extracted, white, 7c; dark, 5@6c.
HAMBLIN & BEARSS, 514 Walnut St.

CHICAGO, April 4.—There is the usual Spring demand for honey, and best white continues to bring 17@18c; honey that is off in color and condition sells for 2@3c less; very little call for dark comb. Extracted, is selling at 7@8c, in cans or barrels. Beeswax, 27@28c.
R. A. BURNETT, 161 S. Water St.

BOSTON, April 4.—Honey is in fair demand; supply short. White 1-lb. comb is very scarce and wanted, at 18@20c: fair to good, 18@19c; 2-lb. sections, 16@17c. Extracted, 8@9c. Beeswax, 30c.
BLAKE & RIPLEY, 57 Chatham Street.

ALBANY, N. Y., April 4.—Honey market is slow, with small stocks of comb. We quote: White comb at 15@16c; mixed, 13@14c; dark, 12@13c. Extracted, light, slow at 7@8c; dark, firm at 6@7c. Beeswax, 26@30c.
H. R. WRIGHT, 326-328 Broadway.

We Club the American Bee Journal and the Illustrated Home Journal, one year for $1.35. Both of these and Gleanings in Bee Culture, for one year, for $2.15.

◆

The Convention Hand-Book is received, and I am well pleased with it. Every bee-keeper should have a copy.

CHARLES WHITE.

Farmers' Valley, Nebr., Mar. 3, 1891.

Bee-Veils.—Mr. George E. Hilton, in an article in the Michigan *Farmer*, on the management of any apiary, writes thus:

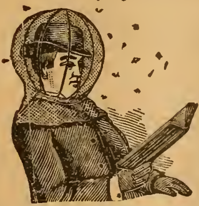
> After trying several bee-veils, I have decided on the "Globe" bee-veil. It was first invented as a protection against flies and mosquitoes; it was a success for this, so now the bee-keepers have adopted them. It is so fine you hardly discern anything before your face. It is very easily put together, no trouble to put on or take off, and folds up compactly in a paper box 6x7 inches, by 1 inch deep. The weight of the entire veil is only 5 ounces, and can be sent by mail for $1.00. This looks like a big price, but with care one will last almost a life-time.

This is the universal opinion of the Globe bee-veil. It is superior to any other on the market.

We send both the Home Journal and Bee Journal for one year, for $1.35.

The "Globe" Bee Veil

Price, by Mail or Express, $1.00.



There are five cross-bars united by a rivet through their center at the top. These bars are buttoned to studs on the neck-band. The bars are of best light spring steel. The neck-band is of best hard spring brass. The cover is of white bobinet with black face-piece to see through.

It is very easily put together; no trouble to put on or take off; and folds compactly in a paper box 6x7 inches, by one inch deep The protection against bees is perfect—the weight of the entire Veil being only five ounces.

Extra Nets, 25 cents each.

CLUBBING OFFER.

We will send this Veil and the Bee Journal one year for **$1.75.** Or, we will give the Veil **Free** for three (3) **New** Subscribers to the Bee Journal, with $3.00 to pay for them.

Subscriptions to the Home Journal may be included in all Clubs, counting two (2) Home Journals as equal to one (1) Bee Journal.

Convention Notices.

☞ The 8th semi-annual meeting of the Susquehanna County Bee-Keepers' Association will be held at Montrose, Pa., on Thursday, May 7, 1891.
H. M. SEELEY, Sec., Harford, Pa.

☞ The Central Michigan Bee-Keepers' Convention will be held at Pioneer Room, at the Capitol, Lansing, Mich., on Wednesday, May 6. A cordial invitation is extended to all.
W. A. BARNES, Sec., Lansing, Mich.

☞ The Des Moines County, Iowa, Bee-Keepers' Association, will meet at the Court House in Burlington, Iowa, on Tuesday, June 2, 1891, at 10 a.m. It is intended to organize a Southeastern Iowa, Association. All interested in bees and honey are cordially invited to attend.
JOHN NAU, Sec., Middletown, Iowa.
GEO. BISCHOFF, Pres., Burlington, Iowa.

◆

Remember the *sad* experience of last season! Everyone should order all the Supplies necessary for the Apiary *at once*, and avoid "the rush." The delays and annoyances of last year should teach a valuable lesson in this line.

◆

A Nice Pocket Dictionary will be given as a premium for only **one new** subscriber to this JOURNAL, with $1.00. It is a splendid little Dictionary—just right for the pocket. Price, **25 cents.**

◆

Calvert's No. 1 Phenol, mentioned in Cheshire's Pamphlet on pages 16 and 17, as a cure for foul-brood, can be procured at this office at 25 cents per ounce, by express.

Wants or Exchanges.

Under this heading, Notices of 5 lines, or less, will be inserted at **10 cents per line,** for each insertion, when specially ordered into this Department. If over 5 lines, the additional lines will cost 20 cents each.

EXCHANGE—One nearly new double-barrel breech-loading Shot-gun, re-loading tools and shell-belt for a Kodak or Hawkeye Camera, or offers. WILBER G. FISH, Ithaca, N.Y.
15A1t

WANTED—Your wax to work up at lowest living prices. Please write at once to J. V. CALDWELL, Cambridge, Ills. 13Atf

WILL EXCHANGE Foundation for Wax or cash; will also make wax into foundation when sent to me, at the lowest price in the world. Send for samples and prices to JACOB WALLERSHEIM, Kaukauna, Wis. 13A4t

FOR SALE—Pure, home-made Blackberry Wine, for table or medicinal use. Warranted. Address R. E. PARCHER, Wausau, Wis.
13A3t

WANTED—To exchange 1-lb. thin Vandervort f'd'n for 2 of wax. Samples and testimonials free. C. W. DAYTON, Clinton, Wis.
8A10t

Illustrated HOME JOURNAL

An Elegant Monthly for the

FAMILY AND FIRESIDE.

50 Cents a Year.

Printed in the highest style of the art, and profusely illustrated with Magnificent and Costly Engravings.

THOMAS G. NEWMAN & SON,
PUBLISHERS
246 East Madison St., - - CHICAGO, ILLS.

It is a moral and intellectual educator, and is invaluable in every library, as well as a very attractive and inspiring ornament in every drawing-room.

Its historical and biographical sketches, as well as its stories, are charming; its departments for the Young Folks, for the Household, and for the Family Circle are very interesting, and all who examine it are sure to become regular subscribers. It captivates them all.

A Sample Copy will be sent FREE, upon application to the publishers.

Who Got First Premium

ON ITALIANS AT

ILLINOIS STATE FAIR IN 1890?

READ the discussion on pages 294, 358, and 456, BEE JOURNAL, and decide for yourselves. Well, let the poor fellow have the honor (?) if he wants it so badly; but read the following letters received by us:

S. F. & I. Trego.—Book me for 6 warranted Queens. The three you sent last year are good ones.—Jno. Lippert, Sparta, Ill., Feb. 27, 1891.

I want another Golden Italian Queen.—W. C. Frazier, Atlanta, Iowa, March 30, 1891.

All who have tried our **5-Banded Golden Italians** want more. We have booked orders from all over the Union, and also in Canada. We claim that our bees will gather more honey than any other race; they are also more gentle and non-robbers, and the most beautiful bees in existence. Send **5 cents** for a sample and be convinced of their beauty.

Orders booked Now—Pay when Queens are Ready.

Prices: Warranted—May, $1.25; 6 for $6. After June 1, $1; 6 for $5. Tested—July, $1.75, Aug. and Sept., $1.50. Selected Tested—July to Oct., $3. Special Breeders—July to Oct., $5. Barred Plymouth Rock Eggs, $1 per 13.

S. F. & I. TREGO, SWEDONA, MERCER CO., ILL.
15D1t

Mention the American Bee Journal.

THE AMERICAN BEE JOURNAL CIRCULATES ALL OVER THE WORLD
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVII. April 16, 1891. No. 16.

Editorial Buzzings.

On Sunny Slopes the grass is green,
And springing crocus tips are seen ;
The timid violet, in surprise,
Peers at the sun with half-shut eyes ;
Listens to catch the hopeful words
From cheerful, reassuring birds.
Come showers, come flowers, come joyful wing ;
Come full-clad, charming Spring !

◆

The Illinois Bill on Foul-Brood was introduced in the House of Representatives on the 9th inst.

◆

One by One the older apiarists are passing away. How long the catalogue now seems! How greatly has it swelled since the "nineties" began! Whose turn is it next? Heaven only knows. The younger ones step up quite firmly to take the place of the fallen ones, and close up the ranks. To them is confided the *unfinished* work, as well as the *new* within sight, and the undeveloped just beyond our ken, yet existing only in imagination.

That Scare is Over about foul-brood being spread by the use of comb-foundation made from the melting of combs which contained the disease. The letters of Messrs. Dadant & Son and M. H. Hunt in last week's BEE JOURNAL are supplemented by one from Ernest R. Root this week. These testimonies settle the matter—proving that we were correct in presuming that the long-continued high temperature, to which the wax is subjected before sheeting is commenced, *does kill the microbes and spores.* Mr. Corniel's fears are therefore groundless, and all may use comb-foundation without the least anxiety in that direction. We are glad, however, that the point was raised, so that it may be forever settled by such testimony as we have presented.

◆

The Patent Congress.—The Congress of inventors and manufacturers of patented inventions is celebrating the beginning of the second century of the American patent system in Washington. It was opened on last Wednesday by President Harrison. Commissioner of Patents Mitchell had for his theme, "The Birth and Growth of the American Patent System." Justice Blatchford, who is recognized as the patent expert on the bench of the United States Supreme Court, spoke on "A Century of Patent Law."

◆

S. D. Haskin, Waterville, Minn., has gotten up a swarm-catcher, but it is much like the Bailey, which appeared in 1880. Great minds run in the same channel.

◆

Fire destroyed the honey-house and work-shop of Mr. G. H. Knickerbocker, at Pine Plains, N. Y., on the morning of April 1, 1891. It contained all his supplies for the apiary, and in the cellar below were his bees, and all were consumed. Fortunately it was insured for about two-thirds of its value. The loss is probably about $800.

Wisconsin has also incorporated its State Bee-Keepers' Association. Dr. J. W. Vance, its efficient Secretary, writes thus in last week's *Wisconsin Farmer :*

We are happy to inform our readers, and especially those who are members of our State Association, that the action of our recent meeting, authorizing the incorporation of the Association has been consummated, and now our society is in shape to push forward its work of building up the interests of apiculture in this State. Last year was, on an average, a poor year for honey, and many of our bee-keepers feel somewhat despondent, but there seems to be revival of hope and confidence in the fact that bees generally have wintered well, and the prospect of a favorable season approaching. We hope every bee-keeper in Wisconsin will become a member of our Association and thus aid in its work.

There are hundreds of bee-keepers in the State who doubtless are unable to attend our annual State Convention, and yet would be glad to become associated with us. To them we will say, send your names, address, and 50 cents to the Secretary, J. W. Vance, of Madison, Wis., and your name will be entered upon the membership rolls, and you will be furnished with a copy of the proceedings of the annual meetings and such other matters as concern the interests of the Association.

Result of United Action.—The following letter will introduce the point at issue :

Rockford, Ills., March 30, 1891.

Mr. Thomas G. Newman—*Dear Sir :* Perhaps you will remember that I requested you to write an essay to be read at the meeting of the Northern Illinois Bee-Keepers' Association last December, and that you wrote on "Exhibits of Bees and Honey at Agricultural Fairs." The subject was discussed freely, as you requested, and a motion was unanimously carried that the President appoint a committee of three, himself to be chairman of the same, to confer with the Directors of the Winnebago Agricultural Society, and ask for a more varied list of premiums.

I called the committee together at a subsequent date to formulate a list of premiums, and I presented the same to the Directors of the Agricultural Society, when they met to revise their Premium List. I am happy to state that they gave us nearly all we asked for ; in fact, more than we expected, having created a special department called the "Honey Department," with a committee made up of honey-producers. Below is the list :

	1st.	2d.
Best sample comb-honey, 24 sections....	$2 00	$1 00
Best sample extracted-honey, 12 jars....	2 00	1 00
Best display of beeswax, including foundation........................	2 00	1 00
Best, largest, and most artistic display of comb-honey................................	5 00	3 00
Best and largest display of extracted-honey	5 00	3 00
Best exhibit of bees in glass hives.........	5 00	3 00
Best exhibit of queens,drones and worker bees in cage	3 00	2 00
Best manipulation of bees showing how to handle them, operated in bee-tent......	5 00	3 00

The above foots up to $46. In addition to this, a few of us offer special premiums as follows :

Best display of pastry sweetened with honey	Silver Cup.	$1 00
Best display of honey vinegar in glass not less than 12 quarts................	$2 00	1 00

Competiton in these is restricted to the members of the Bee-Keepers' Association, their wives and daughters.

I have written the above, friend Newman, thinking you would be pleased to know that your essay had already borne fruit, and also thinking it might serve as a text at least from which to write an article for the Bee Journal. Though as to that, it may be considered unseasonable.

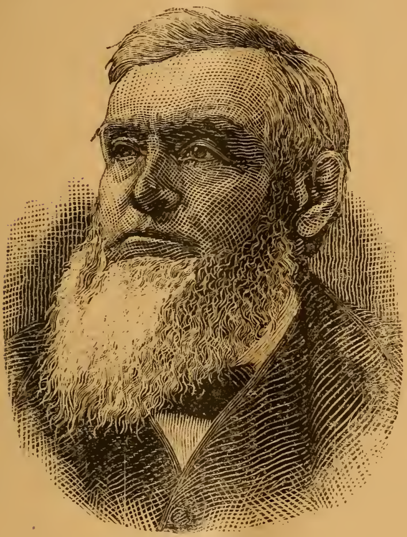
I fear my bees are not coming out this Spring as well as usual. There are many dead bees, and certainly a few dead colonies. S. H. Herrick.

This report from Mr. Herrick forcibly illustrates what we have so often said, that if the apiarists of America but realized their position, they could do a wonderful amount in any reasonable undertaking. United, persistent action always tells, and is generally successful. When will we wake up to our duties, our responsibilities, and our privileges ?

Late.—The *White Mountain Apiarist* for March came to hand on April 10. Bro. Ellingwood should try to catch up. Tardy papers are very disappointing to all who take them.

☞ When may a man call his wife "honey ?" Answer—When she has a comb in her hair.

Mr. Theodore S. Bull, of Valparaiso, Ind., died at his residence on March 30, 1891, aged 62 years. He was in apparent good health until 3 p.m. of the day previous, when he was attacked by *La Grippe*. He grew worse rapidly until 6 a.m. of the 30th, when death ended his sufferings. His demise was so unexpected that only two of his children were at his bedside, though all seven of them lived within a few miles of the parental residence.



The late T. S. Bull.

He was one of the oldest subscribers of the Bee Journal, and was its firm friend. A biographical sketch of his life may be found on page 373 of the Bee Journal of June 15, 1889.

His apiary was kept in a very neat manner, as was his excellent farm. His methods and systematic management were admired by all its visitors. It afforded him the greatest pleasure to show his hives, and explain his methods. Those who attended the conventions in Chicago and elsewhere in this region, will remember his enthusiasm and good natured talk about his bees and management. One by one the old friends are departing, and soon the pioneers will be all gone the way of all flesh.

Spraying the Bloom.—We are glad to notice that Mr. C. H. Dibbern has given a strong warning note in the *Western Plowman* for April, against spraying fruit trees while in bloom. He says:

> If there is one thing that I want to impress upon bee-keepers, farmers and fruit growers this month, it is concerning the spraying of fruit trees. Much damage has been done of late years through the ignorant spraying of fruit trees with insecticides while in bloom.
>
> This spraying to destroy the coddling moth, curculio, and other destructive insects is a necessary and wise proceeding, but it should never be done till the fruit is fairly set, and the trees are entirely out of bloom.
>
> To do this during the time the trees are in blossom, is not only a useless waste of time and material, but is also a great injury to a kindred pursuit—bee-keeping. Many colonies of bees, and even whole apiaries, have been uselessly destroyed by this pernicious and useless practice, especially in recent years.
>
> Spray all you please, but do this at the proper time, which is never while the trees are in bloom.
>
> While there is as yet little or no legislation on this subject, many of the States are moving in this direction. No man has a right to injure his neighbor, especially when it does not profit himself, and I am sure fruit growers will cease this practice when they once fully understand it. This, like almost all the other causes of difficulities about bee-keeping, is solely the result of ignorance.
>
> I hope that all the agricultural papers will sound this key note in time to prevent much damage to our pursuit this Spring.

Some are asking questions about the making of honey vinegar. Full particulars of the most approved methods may be found in an article by Dr. G. P. Hachenberg, of Austin, Tex., on another page.

Supply Dealers desiring to sell our book, "Bees and Honey," should write for terms.

How to Do It.—Mrs. L. Harrison writes us as follows about bee-keepers using their influence with members of the Legislature to get them to vote for our bills now before that body. She says:

Mr. Editor:—In compliance with your request, I wrote to the representatives and Senator of this district, asking them to vote for the $5,000 appropriation for the Columbian Fair. The enclosed is the answer received. If you think it would encourage any one else to "do likewise," you can publish it.

Mrs. L. Harrison.

Peoria, Ills.

Senator Mark M. Bassett is Chairman of the Committee on Canals and Rivers, and his reply is as follows:

Springfield, March 27, 1891.

Mrs. L. Harrison—*Dear Madam:* Yours of the 24th inst. is at hand, and in reply thereto will say that I think a suitable appropriation should be made for the purpose you name, and will do all I can to that end, when your bill comes up. My good wife is with me, and insisted on my early answer, and sends regards. Respectfully yours,

M. M. Bassett.

This shows what can be done by concerted action by bee-keepers. No time should be lost now, as the appropriation matter may come up any day. The Spraying and Foul-Brood bills should also be referred to, when writing to your Senators and Representatives.

◆

A French Edition of the book known as the Langstroth-Dadant, is on our desk. We noted the fact of its appearance on page 378. It is of the same size and general appearance as the American edition, and is a close translation of it, made by our friend Edward Bertrand, Esq., of Nyon, Switzerland. We hope it will have a ready sale in Europe, and revolutionize the methods there practiced.

◆

R. F. Holtermann will resume the management of the supply business of E. L. Goold & Co., Brantford, Ont. So says the *Canadian Bee Journal*.

Progress is reported on the bill to prevent the spraying of fruit trees when in bloom. Just as these forms are ready for the press, we have the following from the House of Representatives at the Capitol:

Friend Newman:—Hip, hip, hurrah! We have carried the "Spraying Bill" through the committee, flying. My speech with letters, etc., have been ordered printed, and a copy placed on each member's desk. Tally one for bee-culture. Hastily yours,

J. M. Hambaugh.

Springfield, Ills., April 11, 1891.

◆

Prof. N. M. McLain has left the Experimental Station in St. Anthony's Park, Minn., and returned to Chicago, to enter into a mercantile pursuit, which offers greater remuneration than a college professorship. We wish him success.

◆

Cork for winter packing receives much favor, because it absorbs no water. If it should become wet, the water will remain between the particles, and dry out very quickly.

◆

We are Sorry to learn, by the last *Canadian Bee Journal*, that friend Macpherson is still prevented from attending to business by his accident, a month ago. He has our sincere sympathies.

◆

Catalogues and Price-Lists for 1891 have been received from

T. Phillips & Co., Orilla, Ont.—16 pages—Bee-Keepers' Supplies.

Christian Weckesser, Niagara Falls, N. Y.—24 pages—Vegetable Seeds.

J. T. Wilson, Pink, Ky.—1 page—Italian Queens.

Daniel Wyss, New Philadelphia, O.—12 pages—Nursery Stock.

R. B. Mitchell, Box 816, Chicago, Ills.—36 pages—Poultry. Eggs, and Poultry Supplies.

F. C. Erkel, Le Sueur, Minn.—16 pages—Bee-Keepers' Supplies.

A Patent was granted on April 7, 1891, to an apiarist in Nebraska on a bee-hive, having a "latticed queen-excluder" in the honey-board, and "a pivoted cut-off or valve located between the sections, fitted to open and close the excluder"—whatever that may mean!

He claims that by this hive he can produce more than three times the honey than by any other. He adds: "My queen-excluders enabling me to fully control the queen, for when not brooding, honey is making, and the honey-receiving combs are, by my invention, kept free from brood, and are hence clean and pure, and the honey commands a higher price in market."

What nonsense! Does the inventor imagine that bee-keepers are yet operating in the old way of cutting comb-honey out of the brood-chamber? His claims are pretty conclusive evidence that he is not posted in the methods of modern honey-production.

It is foolish to claim an increase of 300 per cent. in honey-production upon the use of any hive—no matter what may be its features or excellence. Bees in log-gums, box-hives, or even in trees in the woods, will generally store as much honey as those in hives of the most improved construction. The advantages of the latter are in their ease of manipulation, and in the more marketable condition of the product.

◆

The Columbian Fair.—Mr. C. H. Dibbern, in the *Western Plowman*, asks this very important question, which the bee-keepers of Illinois and elsewhere will do well to give due consideration:

> Well, what are bee-keepers going to do for the World's Columbian Exposition? True, we still have two years to prepare in, but in our pursuit, like the Exposition itself, we will need all the time there is, if we would make a creditable display.
>
> I am pleased to note that some of the leading bee-keepers are taking the matter in hand, and forming a State organization. It may be many generations before we have another World's Fair in our State, and it would be a lasting disgrace if we "got left," and did not even make a reasonable effort.
>
> What would our trans-Atlantic friends think of us, to come to the great State of Illinois—a land flowing with milk and honey—to find only a meager display of honey from the State, while the blue ribbons were fluttering from the elegant pyramids displayed by some native of the Fiji Islands?
>
> Of course, we do not intend to let that thing happen, but we must be up and doing, as even greater surprises have happened. Our display should be large; so large, in fact, that it will astonish people. Of course no one person can do this, but if we unite our efforts, the honey and wax display will be grand.

◆

Apiary Destroyed.—As the subject of spraying fruit-trees while in bloom is now before several Legislatures, the following letter will prove very interesting reading, copied from page 331 of the BEE JOURNAL for 1889:

> The past Winter was very mild in this locality, and bees have wintered well generally. I never had my bees in better condition up to within two weeks ago—in fact I was too much elated over the prospect of harvesting the largest prospective crop of Spring honey that I ever saw; white clover never looked finer, nor promised a greater yield of nectar, than it does at this time; but, alas! the apple-bloom proved a "death warrant" to millions of bees in this immediate neighborhood. One of my neighbors, owning an orchard of about 100 acres of apple trees, sprayed the trees with paris green dissolved in water, just as the trees were in full bloom; and, lo, our bees got the full benefit. The result is, that about ten or twelve bee-keepers have been totally ruined, as far as getting a Spring crop of honey is concerned. The young bees of the colonies that had never been out to the fields, came out of their hives by the thousands, and went hopping all over the grounds; the larvæ in all stages of growth, both drone and worker, were thrown out of the hives by the (I suppose) well bees. Yesterday I examined 4 colonies of the poisoned bees belonging to Mr. Charles Dodge, and I could not find any queen or freshly-laid eggs. I do not know whether the queens are all killed by the poison, or not. Truly, the path of the bee-keeper is a hard one. JOHN G. SMITH
>
> Barry, Ills., May 15, 1889.

Queries and Replies.

Manipulating the Brood-Nest.

QUERY 762.—In working for extracted honey, in a locality where the flora is sufficient not to interrupt breeding from Spring until frosts (the main surplus being from white clover, golden-rod and buckwheat, and using 10-frame Langstroth, chaff and Simplicity hives, wintering in the chaff hives out-of-doors, and the Simplicity in the cellar), would you (in order to get the greatest amount of honey with the least amount of labor) winter with the brood-nest containing the 10 frames of honey (not having extracted any from it during the season), or take out all but 6 frames full of honey, filling out with dummies, and adding the frames taken out in the Spring, by smashing the cells and inserting one at a time in the center of the brood-nest—*a la* Doolittle ?—H. W. G.

I would allow the 10 frames to remain.—J. P. H. BROWN.

I would leave the brood-nest undisturbed.—C. H. DIBBERN.

I would try both ways, and then decide.—J. M. HAMBAUGH.

To get the greatest amount of honey with the least labor, I would seldom take out any combs.—R. L. TAYLOR.

We take out a few combs if we are sure that there are too many full ones; but we prefer to leave more than is necessary for Winter.—DADANT & SON.

I would remove one frame in the Fall, whether wintering out-of-doors or in the cellar, and replace it in the Spring, smashing cells if need be.—A. B. MASON.

I would not contract for wintering alone. I would not use such hives to begin with. If I did, I would not work with the brood-chambers much.—JAMES HEDDON.

Unless the hive is full of bees, it might be better to have less room in Winter. A little too much honey and hardly enough room will work pretty well.—C. C. MILLER.

This question is one that cannot be answered satisfactorily, for it would depend upon the temperature of the locality; 8 frames in a 10-frame hive will give as good result as any, as a general rule.—J. E. POND.

I would not risk a colony with any number of frames *full* of honey. I think empty cells a necessity. Frames of honey or of empty comb are quite as good as dummies. I can see no advantage in "smashing" the cells.—M. MAHIN.

I doubt if it pays to manipulate so much. Contraction, I think, is a little better in Spring, and wise with weak colonies, but I doubt if it pays with strong colonies. Dividing brood-nests should be done with great caution, if at all.—A. J. COOK.

If I wished "to get the greatest amount of honey with the least amount of labor." I would not use that plan, but at the same time it will probably succeed with you. I would try taking out all but 6 frames in Winter, as you suggest.—EUGENE SECOR.

I never have any hives with 10 or 6 full frames of honey in the Fall. I do not like to meddle with the brood-nest in the Fall and Spring. As I now look at it, I do not approve of putting a full frame of honey in the center of brood-nest in Spring, but prefer it at one side. —H. D. CUTTING.

Under the circumstances named, I should leave all the frames in during the Winter, and if the bees did not breed up in the Spring as fast as I wished them to, then I would work them *a la* Doolittle, unless I knew of a better plan. If I did, I would give it to the world so they could profit by it.—G. M. DOOLITTLE.

I do not know what your climate is, but my experience is, that bees will winter better in a full sized brood-chamber than they do when crowded on a few frames. It may be different in a cold climate, but I do not believe it. When my bees have plenty of honey they need no such fussy tinkering with. They will build up like magic when the warm Spring weather comes.—G. W. DEMAREE.

I killed a lot of colonies one Spring by uncapping honey and spreading brood. I would not be afraid to attempt it now, however, as I have more experience. Make haste slowly, and when the combs are covered with bees, uncap a comb and place it on the outside of the brood-nest. A comb of capped brood might be removed from the center, and one uncapped put in its place. Be chary of inserting a cold frame of honey between brood.—MRS. L. HARRISON.

An 8-frame standard Langstroth brood-chamber, with 7-inch frames, will hold from 35 to 40 pounds of honey. If a story of empty combs the same size is used below this, to winter upon, it will be found there will be enough honey for the bees to winter and breed up in the Spring to their fullest capacity, without the use of dummies or bother of any kind. H. W. G. here indicates a few of the many difficulties in working a single brood-chamber capable of holding from 75 to 90 pounds of honey in order to secure good results.—G. L. Tinker.

In the first place, the brood-nest would very rarely be in that condition in the Fall. If it were, it might safely be permitted to remain until Spring. It would be a doubtful experiment to put frames of cold honey "in the center of the brood-nest" in Spring, Observe caution in such matters.—The Editor.

Sundry Questions.

Oyster-Can Bee-Feeder.

Dear Editor:—I send herewith a bee-feeder that you may judge of its merits, and if you think the invention worth anything to the bee-keeping fraternity, that you might give them a description of it in the American Bee Journal. After being filled, the feeder is placed in front of the hive with the little tray slipped in the entrance thereof; the tray will be replenished with the feed from the can as the bees take it up. Please say what you think of it.

Harrodsburg, Ky. J. O. Dedman.

[It is made by soldering a tray 4½x4½ inches by about ¼ of an inch deep, to the end of an oyster-can, having a small opening to admit the honey, which is held in the can as a reservoir by atmospheric pressure. We have often described in the Bee Journal similar oyster-can feeders, and have some in our Museum. One of similar construction came from Europe ten years ago. They are used with satisfaction by many.—Ed.]

Queenless Colonies.

If a colony of bees came out queenless in the Spring, which would be the best way to provide them with a queen? Give them eggs, and allow them to rear one themselves, or purchase one for them? Or, if I had several colonies that were queenless, and I had no money to buy queens with, which would be my best, cheapest, and quickest way, then?

Chetek, Wis. Guy Kellogg.

[In the absence of means to purchase queens to give to queenless colonies in the Spring, of course you should give them frames of brood from which they will rear the necessary queens for themselves.—Ed.]

Five-Banded Italians.

I have kept bees for a great many years, but my loss the past Winter was the most severe I have ever suffered, Out of 42 colonies I have now only 32. All were well prepared for Winter, and had plenty of stores when they died. I have been thinking of purchasing some 5-banded Italians, but before doing so, would like a little information regarding these bees from some one who is thoroughly conversant with them. My idea is, that if they have five yellow bands, they must have the same number of dark bands, and if each band is 1/16 of an inch wide, they must be very large bees, and able to bring in a big load each trip. J. C. Hildenbrandt.

Eckerty, Ind.

[You can learn all about the five-banded Italian bees by writing to Jacob T. Timpe, Grand Ledge, Mich.—Ed.]

Convention Notices.

☞ The 8th semi-annual meeting of the Susquehanna County Bee-Keepers' Association will be held at Montrose, Pa., on Thursday, May 7, 1891.

H. M. Seeley, Sec., Harford, Pa.

☞ The Central Michigan Bee-Keepers' Convention will be held at Pioneer Room, at the Capitol, Lansing, Mich., on Wednesday, May 6. A cordial invitation is extended to all.

W. A. Barnes, Sec., Lansing, Mich.

☞ The Des Moines County (Iowa) Bee-Keepers' Association, will meet at the Court House in Burlington, Iowa, on Tuesday, June 2, 1891, at 10 a.m. It is intended to organize a Southeastern Iowa Association. All interested in bees and honey are cordially invited to attend.

John Nau, Sec., Middletown, Iowa.
Geo. Bischoff, Pres., Burlington, Iowa.

Binders made especially for the Bee Journal for 1891 are now ready for delivery, at 50 cents each, including postage. Be sure to use a Binder to keep your numbers of 1890 for reference. Binders for 1890 only cost 60 cents, and it will pay you to use them, if you do not get the volumes otherwise bound.

Topics of Interest.

Keep up the Price of Honey.

JAMES HEDDON.

Mr. Thurber and others have told us about the price of sugar, after the tariff was removed, and I think they told us the truth, for, now that we have enjoyed two days of "free trade" in sugar, we can buy 18 pounds of A No. 1 granulated sugar for $1. But how is it about syrups; these twin sisters of sugar. By the market reports we notice either a *very slight* reduction, or none at all, in the price of the last named commodity.

I desire, Mr. Editor, to make the argument, that as honey is by no means a staple—nor anywhere near it—as is canned fruit and other sauces, extracted-honey will not be appreciably affected by the slight lowering in the price of sauces in general, which may take place because of the reduction in the price of sugar.

Are we *sure* of this reduction in the price of canned fruits? Are canned fruits as closely related to sugar as our syrups? Certainly not. The consumers of extracted-honey are, as a rule, of a class who will not associate honey and fruit sauces. They will, we think, buy just as much honey at 10 cents per pound, when sugar is worth 4 cents, as when it is worth 8 cents.

It has been said that this reduction in the price of sugar will not effect comb-honey; and yet comb and extracted-honey are more nearly related than is extracted-honey with sugar and sugared fruit-sauces.

Now, I am firmly of the opinion that the greatest cause of the depreciation of prices in any commodity, or all commodities, is the prevalence of opinion that a reduction must necessarily take effect. Let bee-keepers once become possessed of the idea—as mistaken as I believe it would be—that the late reduction in sugar will correspondingly lower the price of extracted-honey 2 cents per pound, and down it will go; and the cause will be the dominant *belief*, and not the reduction in the price of sugar.

Now, Mr. Editor, if you do not believe, or any of your readers do not, that the above is very modestly stated, I wish you would solicit M. M. Baldridge to write an article for the BEE JOURNAL upon this subject, in which, I believe, he will more than bear me out in all the above statements, making this short article appear very conservative, and at the same time will substantiate every statement he may make, by giving the results of years of experience.

Such an article will surely be worth thousands of dollars to bee-keepers who will read it, if they will act upon it. There is no need of, nor are bee-keepers able to bear, any further reduction in the price of honey. Will Mr. Baldridge tell us what he knows about these matters which are of vast importance.

Dowagiac, Mich., April 3, 1891.

Wisconsin Bee-Keepers' Convention.

BENJ. E. RICE.

The Southwestern Wisconsin Bee-Keepers' Association met, pursuant to call, in the Court House, in Lancaster, Grant county, Wis., March 25, 1891, and was called to order by the President, at 1 o'clock p.m.

The Secretary read the proceedings of the two previous meetings, and, after striking out one clause, the minutes were adopted as read.

The Treasurer's report was adopted as read.

A motion was adopted that a committee of three be appointed to draft resolutions: N. E. France, R. P. Greene, and Bernard Bartholomew were appointed as such committee.

"Other occupations that pay to combine with bee-keeping," was the title of an essay by Mr. Prideaux.

Mr. Prideaux asked how best to feed bees in Spring, and it was decided that it was best to feed inside of the hive, and the pepper-box feeder seemed to be the favorite.

Spring dwindling was dwelt on at some length, and much information elicited.

"How can a queen be kept, after being hatched. until she is wanted."

Mr. France's method, to cage in the usual way, and suspend in any strong colony, met with the most favor.

"What birds are the most destructive to bees," was the next subject, and was introduced by Edwin Pike, whose experience was that the King Bird was the most destructive, and they should be killed whenever found among bees. The Pewee and Flycatcher were described, and while the King Bird is the most ferocious, yet the Pewee and Flycatcher do great harm among bees, and should be killed. It is *not* wanton destruction to kill them when destroying bees, because it is self-protection.

"What is the best way to find a queen in swarming time?"

This question was with reference to unfertile queens, and it was decided to be best to catch them at the entrance; but in adopting this method it would be well for another person to be looking after the swarm.

On motion, the convention adjourned until 7 o'clock p.m.

EVENING SESSION.

The convention reassembled at the appointed hour, and the first subject for consideration, was "The best way to ventilate a bee-cellar."

Several methods were discussed, and it was finally decided that the air-escape should be within 6 inches of the cellar floor, so as to take up more foul air, and that it should connect with the chimney; also, that all dead bees should be swept up often, to facilitate ventilation.

"Would it be better to place weak colonies on top of strong ones, in tiering up in Winter quarters?" It was thought that it might be of some advantage.

"Is it better to use full sheets of foundation for surplus, or only starters?"

This seemed to be considered a matter to be governed by circumstances, but it was decided best to use full sheets, if one could afford the expense.

A motion was made and carried, that Mr. France favor the convention with a song. That gentleman did ample justice to the occasion, and was rewarded with prolonged applause.

A motion was made and adopted to adjourn until 9 o'clock a.m., to-morrow.

SECOND DAY—MARCH 26.

The convention was called to order at 9 a.m.

Committee on Resolutions submitted the following, for consideration:

1. That the next meeting be held in Fennimore or Boscobel.

2. That hereafter the regular annual meetings be held in the Fall, at which time the officers shall be elected and payment of dues made.

3. We suggest Oct. 14 and 15, 1891, as the time for the next meeting.

4. That a committee of three be appointed to look after honey sales. That this committee ascertain the best markets, and report the same to the Secretary, in order that members may make profitable sales.

5. That the officers to be elected shall be a President, Vice-President, Secretary, Assistant Secretary, and Treasurer.

The above resolutions were unanimously adopted.

A motion was adopted that a Vice-President and Assistant Secretary be elected, to fill the unexpired term.

Motions were unanimosly adopted that Mr. Prideaux be Vice-President, and Mr. France be Assistant Secretary for the unexpired term.

N. E. France, Bernard Bartholomew, and Henry Evans were appointed a Committee on Honey Sales.

A motion was unanimously adopted that the next meeting be held in Fennimore, Grant county, Wis., Oct. 14 and 15, 1890.

On motion, R. P. Greene, Bernard Bartholomew and R. C. Willis were appointed a Committee of Arrangements for the October meeting.

"Enemies, and how to avoid them," by N. E. France, was the next subject.

The moth miller was particularly mentioned, and the remedy that has proved cheapest and best is strong colonies. The common skunk was shown to be a benefactor, for the reason that it destroys ant nests, cockroaches, and many other insects that are destructive to bees.

Then followed an essay on "Spring dwindling, cause and cure," by Edwin Pike.

"Location and laying out apiary, shades, etc.," was the subject of the next essay by Benj. E. Rice.

Supplementary to this subject, a plat was shown illustrating the manner in which, when a north or west protection was not to be had without great expense, the hives could be placed in rows, either north and south, or east and west, and then face the hives to the southeast, and thus the cold winds and storms would not be likely to blow directly into the entrances.

The subject of "Foul-Brood" was ably handled by N. E. France, and the many features of this dread disease classified on a chart, which was plainly and thoroughly explained.

It was decided that there would be but little danger in the use of comb-foundation from abroad, as the heat in rendering the wax should be sufficient to destroy all germs, unless, perhaps, in case of that rendered by the solar method.

Seven names were added to the roll of membership during the convention.

On motion, the convention extended a vote of thanks to the several local papers, and to the bee-periodicals, who so freely gave them space in their publications. Also, to the officers of the county and citizens of Lancaster for the use of the Court House.

The convention then adjourned to meet in Fennimore, Oct. 14, 1891.

Boscobel, Wis.

Comb-Honey vs. Extracted-Honey.

WILLIAM E. GOULD.

I am often asked by beginners in bee-keeping, "Will it pay one to produce extracted-honey?" To answer this question, one must observe the person who asks it, and his condition as a bee-keeper. As, perhaps, many of the young bee-keepers present are asking themselves this question, I will attempt to briefly give them the benefit of my experience.

One of the first things to decide, is whether you intend to make bee-keeping a permanent business or not. By this I do not mean bee-keeping as a speciality, but as a permanent occupation, or work, in connection with something else.

If you are discouraged, or half-hearted, in the matter, the least amount you invest in apiarian tools, the better. And as you cannot produce extracted-honey without purchasing a few tools, you had better confine yourself to the production of comb-honey.

But, if you have the bee-fever in its acute form, and possess an apiary of from 10 to 20 colonies, it becomes a question well worthy of consideration.

To begin with, you will need an extractor, and an uncapping can and knife, which will require an outlay of from $12 to $18. Now, if you run 10 colonies for extracted-honey, you will need 120 combs. These combs will cost another $18, but there is one good feature about them, they will be good property should you give up extracting, and are always in demand, so that they may be readily disposed of.

In an average season, one colony of bees will store from 45 to 50 pounds of comb-honey, while one run for extracted-honey will store from 80 to 100 pounds; hence, 10 colonies will store from 300 to 500 pounds more of extracted than of comb-honey, thereby, in one good season, half paying the necessary outlay for tools.

But suppose we do not have an average yield, what then? In a poor season, he who works for extracted-honey will get some kind of a yield, even when those who run for comb-honey get nothing. Last season I run 22 colonies for extracted-honey, and harvested 600 pounds (a very poor yield). I also run 42 colonies for comb-honey, and harvested almost nothing. Hence, I am firmly convinced that it has paid me to produce extracted-honey.

Bees are in condition to make comb only when well fed, and hence, in a poor honey season they cannot make comb. It is not a question of disposition, but of material with which to work, and for the same reason they will not—in fact, cannot—store honey in sections, but what honey is gathered, is stored in combs that are ready for its reception.

In regard to selling extracted-honey, I can dispose of it just as easily as the comb-honey. It can be produced cheaper, hence, can be sold for less, and that is a redeeming quality in the eyes of many consumers.

We may produce a good article of extracted-honey, or a poor article. The bees may be left in good condition to winter, or in condition to starve. Before commencing to produce it, the novice should read up on the subject, and then proceed cautiously.

For many reasons I am of the opinion that it pays to produce both comb and extracted-honey in the same apiary.—*Read before the Newaygo County (Mich.) Farmers' and Bee-Keepers' Association.*

Method of Making Honey Vinegar.

G. P. HACHENBERG, M. D.

In the AMERICAN BEE JOURNAL of Aug. 8, 1888, I had an article on "Bee Work," and in the same I gave a method of making honey vinegar. Even to this date I receive letters, asking further particulars for making the vinegar. Instead of answering these communications individually, I will write an article for the BEE JOURNAL on the subject, and refer my correspondents to the same.

When I wrote the former article, I made a honey vinegar only for our home market, and had it put up in barrels, and some in bottles. It was retailed at 50 cents per gallon, and 25 cents per bottle. The grocer paid me 30 cents per gallon, and supplied his own vessels. The bottles had a neat label, printed in your establishment. I was not able to meet the demand for the article a year after its introduction, and of late have ceased making it, except for my family use, in consequence of ill health.

The vinegar is made as follows: Take 15 pounds of honey, 8 gallons of warm soft water, 1 pint of yeast. Mix well, and let it ferment in an open vessel, covered with cheese cloth. After it has fermented for about a week, make a mixture of 6 ounces of alcohol, 6 ounces of chemically pure acetic acid, one-half ounce of tincture of cardamom, in 2 gallons of soft water, and add it to the vinegar that is in a state of fermentation. The tincture is to go into the alcohol before the water is added. If the vinegar is kept in a dry, warm place it will be fit for use in about a month.

Only enough cardamom is required to give it the slightest taste, without revealing its character. The crude, commercial acetic acid will spoil the preparation, and will not be healthy, whereas the pure acetic acid is not only very pleasant to the taste, but makes a healthy vinegar.

This vinegar has been pronounced superior to any of the expensive foreign vinegars introduced in this city.

In making honey vinegar, I used the extracted-honey less than the washings of the cappings, honey vessels, etc. But whatever kind of honey you use, let it be free from all impurities. Do not depend on the process of fermentation for purification.

In using the washings, there is only one way to determine when the honey solution is strong enough for making vinegar, and that is to ascertain its specific gravity. First, take the specific gravity of the standard solution given above—that is, 15 pounds to 8 gallons—and mark the meter at that point. Afterwards, you regulate your washings until you have reached the standard mark. It must be remembered when the solution of honey (alone) is too strong, honey itself being a powerful antiseptic, it will not assume an acetic fermentation, but only the vinous.

In making honey vinegar, I have a secret worth keeping; and that is, if you once have good vinegar in a barrel, it will take the washings for a long time, leaving always good vinegar to draw from—that is, for family use.

Since I make honey vinegar only for my own family use, I resort only to the washings, and throw the fluid into an open vessel. In place of acetic acid and yeast, I effected the primary fermentation by dropping into the solution a part of a Mexican vinegar plant, that was sent to me for experimental purposes. Afterwards, I added the alcohol and cardamom as before. It made a very strong, superior vinegar, and I have kept up the supply for over a year by adding washings, as they happened to be on hand. The only objection the family had to it, was that it was too strong, and contained too much acetic acid. The fact is, there was not a drop of acetic acid put into it, and simply by adding water we find all objections removed.

I know nothing of the botanical name and nature of this Mexican vinegar plant. I was told that in Mexico and Southern Texas it was very much used for making vinegar.

Austin, Texas.

Preventing Robbing of Weak Colonies.

T. C. KELLY.

Having read an article from the pen of our esteemed fellow bee-keeper, G. M. Doolittle, in the *American Rural Home*, on the prevention of robbing by bees in the Spring, I will give my method:

When I find a colony that is being robbed, I close the hive for a few minutes, until a number of bees collect at the entrance, and in the meantime get a handful of flour, then open the entrance (by this time the robbers are loaded with honey), and the little rascals will make a rush for home. As they come out, give them a good dusting with flour, until they look like "millers," then keep your eye over the apiary till you see the white-coated chaps entering their hive, then close the hive that is being robbed again, and let it stand 10 or 15 minutes. By that time the most of those engaged in the business will be gathered around the entrance trying to get in.

Take the hive that the robbers came from, carry it to the stand occupied by the weak colony, remove the weaker one from the stand, turn the hive around, brush all the bees off of it, and set the hive containing the strong colony on the stand. Pick up the hive containing the weak colony and carry it to where the strong one was, making it look as much like the other one as possible; return to the strong one and change its appearance by placing a piece of clored cloth in front.

You can then sit down in the shade and watch the proceedings with pleasure and amusement—and it is amusing to witness the humble supplication of the little fellows on their return to the old stand, and the humiliating attitude which they assume, standing on their fore legs, with the business portion of their anatomy elevated in the air, and pleading for admission and recognition from those whom, a few minutes before, they had been trying to rob. If there are more colonies than one engaged in the robbing process, I change them with others that are not so strong.

Now, this is no theory, as I have practiced it for several years, and always with success, and if there are any suggestions, improvements or criticisms from our bee-keeping brothers, they will all be accepted in a spirit of friendship.

Slippery Rock, Pa.

Most Practical All-Purpose Hive.

ROBERT E. ASHCRAFT.

The subject which our Secretary has assigned to me is a delicate one to handle, and, as I may step on someone's toes, perhaps I had better begin by asking pardon, if I should do so.

First, let me ask you to remember that it is only for this latitude that I am speaking, and that "the most practical bee-hive" for this locality, may not be the most practical in some other latitude.

The most practical all-purpose bee-hive, is the one that, all things considered, is best adapted for producing either comb or extracted-honey, and for either out-door or cellar wintering.

Such a hive should admit of being tiered up; and should be ample protection against heat or cold. The brood-nest should be of just the right size—neither too large nor too small; if too large, too much honey will go into the brood-nest when comb-honey is the object sought; if too small, excessive swarming will be the result, and in either case the bee-keeper will be defeated. It should also admit of easy manipulation.

After testing several styles of hives, I find the one known as the "Hilton chaff hive" comes nearest to this ideal. With the system I practice when working for comb-honey, I can use any number of sections, from six to forty-eight, and one or two tiers deep.

For extracted-honey, supers holding twelve frames, the same size as the brood-frames, may be used. It requires no shade board in Summer, and no outside protection in Winter. The brood-nest contains eight Langstroth frames, 9⅛x17⅝ inches, giving the amount of comb surface recommended by nearly all prominent comb-honey producers.

Having worked two seasons in an apiary where part of the bees were cellar wintered, and a part packed in chaff on the summer stands, I have had an opportunity to compare the two methods, and it is my opinion that the saving of stores, so much talked of as an inducement to cellar wintering, is not as apparent at the opening of the honey harvest as at the time of taking the bees from the cellar.

However, if the bee-keeper desires to winter his bees in the cellar, the chaff hive will be just as safe there as a single-walled hive, and when those sudden changes of temperature occur, as they often do during the months of May and June, and the mercury goes down to 40°, or perhaps lower, he will be delighted to find no chilled brood in the chaff hive, as is so often the case with single-walled hives.

With such a chaff hive as I have described, there is less danger of robbing, as there is less scent of the honey coming from the hive, the double wall and chaff confining the heat and honey smell.

Again, the supers and honey-boards, or whatever is used above the brood-frames, are protected from the weather. The sections are not swelled and discolored, as the effects of a beating rain.

There are many more reasons that might be urged in favor of chaff hives, but my time for writing is limited, and as enough has been said to start the discussion, I will leave the subject in your hands.—*Read before the Newaygo County (Mich.) Farmers' and Bee-Keepers' Association.*

Moving Bees in a Wagon.

C. H. DIBBERN.

I had thought I knew all about moving bees. as I had gained some little experience on a former occasion, but I did not yet know it all, as I soon learned to my cost.

The time had come when the bees must be moved, and I hired a boy with a spring wagon and one horse to help me. I had determined this time to fasten the bees in with wire cloth, as I was not going to get into any trouble, for I had promised the boy and his father that, or I would not have got the rig at all.

The entrances to the hives were about 1½x3 inches. Over these I nailed little patches of wire cloth, and also over the auger-holes, bored a few inches higher up.

As the hives appeared to be well glued down on the loose bottoms, I concluded that no further fastening need be done there. As the caps slipped over the hives and rested on cleats, I never thought of any bees getting out there, so the work of preparation was reduced to a minimum. In fact, the bees were simply fastened in, and the whole hive set in the wagon. I had expected to haul about half at a time, but I found that six was all the wagon would hold.

We soon had them loaded and started on a rough rock-road toward Rock Island. I had never before realized how rough the roads were. The wheels went crashing over the rocks, and the hives were slamming against each other, though the horse was walking slowly.

We had proceeded about a mile, when, looking back, I noticed hundreds of bees in the air following us. I knew at once that bees were getting out somewhere, and that if the exit was not speedily closed, there would be trouble.

I stopped the team to investigate, and soon found that one of the caps had shifted to one side, allowing a space large enough for the bees to get out, and they were making good use of the opportunity, too. I slipped the cap back to close the crevice, but that only opened a similar crack on the other side, where the bees at once came rushing out.

Had I taken my handkerchief and corked up the crack, all would have been well, but for the moment I could think of nothing that would stop the trouble. I was getting a good deal excited, and was in mortal fear that the boy and horse would get stung, and that the horse would run away.

In my anxiety I concluded to take the hive out of the wagon, and leave it by the roadside for another trip. In jerking the hive out I managed to partly slip it off the bottom, letting out many bees—and how cross they were. I was stung more than twenty times in about that many seconds, but I got the hive out and told the boy to drive on a short distance.

The hive was now in the middle of the road covered with angry bees, and the street full of passing teams. Fortunately it was about dusk, and bees were not inclined to fly much, and no horses nor anyone besides myself were stung.

What disposition to make of that hive was a puzzle to me, as it would not do to leave it in the street, and I could not touch it for the bees. I succeeded in borrowing a blanket, and by throwing it over the hive I moved it into a fence-corner, where it was left till the next day.

We started on with the remaining hives, but had not gone very far till some of them began working off their bottoms, and we decided to unload all and return for them the next morning. This we did, and you may be sure the hives were nailed together, when we again loaded them into the wagon.

The rest of the bees were moved without any further incident, but I had learned a lesson that I have never forgotten. The hives were placed under some small trees on the lawn, but the season was over, and they could only acquaint themselves with the lay of the land, and their new home. I had made a special room in the cellar to winter them in, and in due time they were stored away.—*Western Plowman.*

Foul-Brood Spread by Comb-Foundation.

ERNEST R. ROOT.

On page 447 of the American Bee Journal, Mr. S. Corniel, of Lindsay, Ont., says that foul-brood may be spread by the use of comb-foundation. He gives some interesting figures, showing the temperature at which spores and fully-matured microbes may be killed. He says it has been ascertained that the death-point of the most resistant fully-matured microbe is 140°, and that the spore of the microbe could not be killed under a temperature of 257°. Wax, he says, melts at a lower point than 145°; and he adds that, in sheeting it for foundation, the wax is kept at a temperature as near the congealing point as possible, and concludes by saying: "There is good reason for believing that foundation has been sent out which has never been heated up to 190°, much less to 257°. It is highly probable that such foundation would contain germs of foul-brood, if made from the wax of foul-brood comb."

On the face of things, this appears to be a pretty serious state of affairs; but, happily, the facts come to our rescue, and prove that there is no cause for alarm.

We have melted the worst kind of diseased combs in our large heating-tank, made foundation, and put it in our own apiary, but no trouble ever came. And there is not wanting testimony from various other experimenters to prove it. But if Mr. Corniel's theory be true, would not foul-brood have been universally spread all over the land with the advent of comb-foundation, years ago?

Now, friend Corniel, I do not wish to dispute point blank, so I will explain why the disease will not propagate with foundation. All our wax is melted by steam in a large vat, holding over a ton. This vat is enclosed in another, and is, therefore, surrounded by water. I have just been down, and found that the temperature of this surrounding water was 200°. After the wax in the inner vat is melted, this temperature is allowed to go down to about 180°. We aim to keep the wax itself in the melting vat at from 170° to 180°, and this temperature is maintained for days.

The supply of wax is kept up by putting in a few cakes at a time, and it is dipped out as fast as wanted. As Mr. Corniel himself admits, a long-continued high temperature is equivalent to a much higher temperature for a few minutes; and not only the microbes, but the spores themselves, have to succumb. A few hours of 170°, we know from long experience, will kill all foul-brood germ-life.

While the wax in the melting-vat is kept at 170°, that in the dipping-tank is kept very near the congealing point—140°, sometimes as low as 130°. But before it has arrived at the dipping-tank, it has long been thoroughly disinfected by the long-continued heat of 170°.

Dadant & Son have a similar melting arrangement, and I feel sure that their foundation, like our own, is *perfectly free* from any live germs.

Perhaps I should remark further, that the wax melted in a solar extractor *might* not be disinfected, and it would be a wise precaution to remelt all such wax that has come from diseased colonies.

Medina, O.

Getting Bees Started Right—Spraying.

DR. C. C. MILLER.

A correspondent writes: "Last year I did not use honey-boards. The bees commenced at the bottom instead of the top of the frames in the upper story. I got 40 pounds to the colony—not a comb ever touched my coax-comb guides. I thought the bees would work above more readily without the honey-board. Is this the usual result when the honey-board is left out?"

Well, that was a joke. I do not know that I would have thought of it, but that is just about what might be expected if a good sized chamber of usual depth——say 8 to 12 inches—were placed over the hive with nothing but narrow starters at the top. You see the starters were so far from them that they paid no attention to them, but just commenced building up from the tops of the brood-frames.

If at least one of the frames had had its foundation coming clear down to the bottom, that might have induced the bees to have gone to the top, to cluster there. Even with the honey-board, they might sometimes commence at the bottom, but would not be likely to, for that would hinder them about clustering over the tops of the frames.

This correspondent also asks about bees, that appeared in considerable numbers in June, with black heads and backs, and unusually slender. They were nothing but bees with their hairs gone. Perhaps, robbers; perhaps some accident had happened to a colony that had stripped some of the bees of their hair, such as being shut up in a hive till they were overheated. They were no more slender in reality than others, but being stripped of their hair they appeared so.

POISONOUS SPRAYING.

Another correspondent asks why there is so much apathy among bee-keepers as to the matter of securing the passage of laws to prevent the poisonous spraying of fruit trees, while they are in bloom. This question may well be raised.

If all fruit growers were sufficiently informed, there would be little difficulty in the matter. Spraying the blossoms can do no good whatever. There is no worm to kill in the blossom. The egg is laid in the little fruit after the blossom has dropped off; so that it is a useless expense. Not only that, but I suppose it is a real damage to the tree. If the poison is put on sufficiently strong, it will kill every leaf. Is it likely that it does no harm when diluted?

The question may be asked, whether it would be put on at all if it injures the foliage. Even if it does injure the foliage to some extent, the damage is so much less than that done by the worm, that it pays to spray. But there is expense and loss, and positively no gain, in applying the poison to the blossom. The damage to the foliage is probably greater at that time, for the foliage is then more tender.

But all fruit growers are not thoroughly posted, and in their ignorance may do that which will be a damage to themselves, as well as to their bee-keeping neighbors. A law bearing on the case would be a good educator, and would give the bee-keeper a very efficient weapon of defense.

It is, of course, a matter for State legislation. The Michigan Legislature, if I am not mistaken, is now considering such a bill. Has any other State Legislature passed a bill of that character?

As my correspondent is an Illinois man, he can have the comfort of knowing that we have two good men at Springfield to look out for our interests. The sooner the thing is started the better.

It would be a matter of general interest, if instructions were given for all the States to act upon. I think this is the time of year for it. I hope there may be a general awakening.

Marengo, Ills.

[The full text of the Michigan bill appeared on page 438, and the Illinois bill on page 473. So far as we are informed, no other State has taken any action in the matter.—Ed.]

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Dividing and Italianizing.

JULIUS PETTY.

On page 327, N. A. Ellett asks for the best method of increasing 11 colonies to 100, and furnishing them with queens from one tested Italian queen. In the first place, he must prepare for queen-cells to supply his colonies with queens, so as not to stop breeding very long. Examine the strongest colony and ascertain whether they are in condition to be divided, and if not strong enough for that purpose, feed the bees until the requisite condition has been attained, which may be in May or June. Also, examine the combs, to see if there are sufficient eggs and larvæ in the cells, to rear a queen. Divide, and allow them to build queen-cells. On the eighth day (having passed 3 days in the egg, and 5 in the larval state), the queens commence to spin their cocoons. Three days after this, the queen-cells may be cut out, and one given to each of the queenless colonies. On the sixteenth day the queens will emerge perfectly developed. After the eighth day Mr. Ellett can divide all his colonies, placing the old queen in the new part of the divided colony, with two frames of brood (about ⅕ of the whole), and giving it the old stand, to receive the returning bees. Remove the old colony about 30 feet away.

Independence, Ky.

CONVENTION DIRECTORY.

Time and place of meeting.

1891.

May 6.—Central Michigan, at Lansing, Mich.
W. A. Barnes, Sec., Lansing, Mich.

May 6.—Bee-Keepers' Ass'n and Fair, at Ionia, Mich.
Open to all. Harmon Smith, Sec., Ionia, Mich.

May 7.—Susquehanna County, at Montrose, Pa.
H. M. Seeley, Sec., Harford, Pa.

June 2.—Des Moines County, at Burlington, Iowa.
John Nau, Sec., Middletown, Iowa.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—The Editor.

North American Bee-Keepers' Association

President—P. H. Elwood....Starkville, N. Y.
Secretary—C. P. Dadant......Hamilton, Ills.

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National Bee-Keepers' Union.

President—James Heddon ..Dowagiac, Mich.
Sec'y and Manager—T. G. Newman, Chicago.

Bee and Honey Gossip.

Bees Gathering Pollen.

I commenced the season of 1890 with 3 colonies, in old-fashioned hives. They cast 5 swarms, which I put in Langstroth hives, and they gave me 375 pounds of comb-honey in one-pound sections, and from the old hives I cut about 200 pounds of comb-honey. The sections I sold for 18 to 20 cents each, and kept the greater part of the other for my own use. My bees are Italians and high grade hybrids. I winter on the summer stands, with no other packing than a chaff cushion. They have wintered well, and are now gathering pollen freely. Chas. W. Willard.

Carbondale, Kans., April 6, 1891.

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Be Sure the Entrance is Open.

One day last June a colony in my father's apiary cast a swarm which settled on a tree some distance away, and my father sawed off the limb on which they had clustered, and carried them to a hive which was in readiness. He had no more than placed them on the ground in front of the hive, when another swarm was cast, and he left the first swarm in my charge, and went to look after the second one. The first swarm would not enter the hive, however, but returned to the tree. After we had brought them from the tree the third time, I suggested to my father that there must be something the matter with the hive, and he brought another hive and placed them in front of it, when they immediately entered. Next morning, as I was starting to school, I noticed my father examining the rejected hive, and asked him what was wrong about it. "You go to school," he said, "and the next time we try to hive a swarm of bees, we had better take the entrance blocks away, so that the bees can enter the hive."

WORTHY E. STONER.

Atlantic, Iowa.

Perished on the Summer Stands.

Last Fall I took 6 swarms out of trees, and put them in hives, and they wintered nicely, although other bees in this vicinity have not fared so well. Most of the bees having been left out on the summer stands, one-half of them have perished. C. W. GERRISH.

Rochester, N. H.

Cheap Feeder.

In the Spring of 1890 I purchased 4 colonies of black bees, in box-hives, which increased to 11 colonies by natural swarming, but, being a poor season, I only secured 100 pounds of honey from the original 4 colonies, and fed the bees 36 pounds of granulated sugar last Fall. I Italanized my bees last Fall, but wish to improve them still further the coming Summer. Two of my colonies are pure Italians, and the remainder are hybrids. I use the V-shaped top-bar to brood-frames. My bees are wintered out-of-doors, the hives resting on two 2-inch planks, placed 2 inches apart, and facing the south. I put dry oat straw behind, under and between the hives, burlap over the brood-chamber, and 8 inches of dry maple leaves in surplus chamber. I unpacked them March 24, and found them all right, with plenty of stores. I made cheap, and, I think, good feeders, by using ½-inch siding, about a foot long, for the bottom, and ripping a piece of the same material lengthwise for the sides and ends. Then I took 2 little strips, less than ½ inch thick, and laid them crosswise, and tacked onto them other little strips, running lengthwise of the feeder, and ¼ of an inch apart. This I put into the feeder as a float, to prevent the bees drowning, and placed the feeder on top of the cloth, over the brood-chamber.

Kankakee, Ills. B. E. GRAHAM.

Bees in Poor Condition.

I have 26 colonies of bees in fair condition, but they will require feeding before the honey-flow commences. This has been a very backward Spring, and for that reason I do not expect many early swarms. Last Spring my bees gathered the first pollen on March 4, and by April 15 the hives were heavy with brood. May 1 they began to swarm, and continued swarming until about June 15, and it kept me hustling making hives for them. I have sown some sweet clover this Spring.

GEORGE F. TIBBETTS.

Ocheltree, Kans., April 1, 1891.

Grading Honey in California.

Bees here seem to be doing well. I have had some swarms. I do not anticipate a very large crop, however. I have read with considerable interest the letters from apiarists in regard to a trade-mark. The Ventura County Bee-Keepers' Association (of which I am Secretary) passed a resolution to elect a "grader," to be known as the Ventura County Honey Association Grader, whose business it will be to inspect honey and place the appropriate grade-brand of the society on each package containing it. It seems to me that if the Grader is honest, that will fill the bill, and buyers will know just what they pay for. S. C. GRIDLEY.

Nordhoff, Calif., April 3, 1891.

Swarm-Catcher.

In 1889 I purchased one dozen Alley queen-traps, but they did not prove what I expected. I could catch the queens, but sometimes 3 or 4 swarms would issue at one time, and, of course, cluster together. Now, the big doctors had told us (and I believed them) that when the bees found they had no queen, each swarm would return to its own hive, but they would not do that for me. The swarm that started for their hive first, were pretty sure to be followed by the whole lot. This made queen-catching a nuisance, and I began to wonder what I was going to do about it. After a little thought I said, why not catch the whole swarm? I immediately made a big swarm-catcher, which was soon increased to 3 or 4, and now, after trying them thoroughly last season, and catching dozens of swarms without one failure, I am prepared to say they are just O. K., and shal have at least one dozen of them in my home apiary this season. In using them, whenever a swarm commences to issue, immediately adjust a catcher to the entrance, and in five minutes the bees are all caught, when it is closed tightly, and carried to the wintering cellar near by, where they remain until I am ready to hive them, if that should not be for two days. When ready to hive the bees, bring them out—they will be perfectly still, and I can just dump them down in front of their hive, and they will march in, as if they had no wings, hardly a dozen bees taking to flight. I have had 4 swarms in the cellar at one time, and can hive them within 4 feet of each other without danger of their mixing. Yes, the swarm-catcher will stay, whatever becomes of the self-hiver. B. FAYLOR.

Forestville, Minn.

Poplar Trees.

On page 294 P. D. Ellingwood asks concerning the time of blooming of the poplar, and its value to the honey-producer. We have considerable of it in this section, and it is known with us as white wood. We have two kinds, the yellow and the white. It blooms in the early part of June, and some years yields heavily of a dark, thick nectar, and the honey gathered from it has a very pleasant flavor. In the Summer of 1888 the nectar was in large drops inside of each flower—so large that it could be taken out with the tongue or finger nail.

T. K. MASSIC.

Concord Church, W. Va.

Too Much Rain.

I find, by reference to my "bee-notes," that the first pollen was brought in last year on Feb. 18, from soft maples; whereas, the first pollen gathered this year was on March 24—more than a month later. The Winter of 1889 the bees had good flights once or twice every week, but the past Winter they had but two flights between Jan. 1 and March 25. The cause of the great difference is not cold, but cloudy and rainy weather, of which we are tired. My bees are pure Italians. Last year they averaged 125 pounds per colony, mostly comb-honey. I have, up to this time, wintered my bees on the summer stands packed with straw, but shall hereafter adopt a different plan, and use double-walled hives, of which I have made several for next season.

Trenton, N. J. JOSEPH EHRET.

Caused by Lack of Stores.

My bees came through the Winter in fair condition. I lost 3 out of 39 colonies, by starvation, but the remainder are in good condition. The weather has changed, and bees are flying nicely.

BENJ. E. RICE.

Boscobel, Wis., April 8, 1891.

White Clover Dead.

I have 28 colonies of bees which wintered in the cellar without loss. I placed them on the summer stands on April 1, and it was a grand sight to see them fly. Bees did not consume much honey during the Winter, and are in fine condition. They are now taking in rye flour, extremely lively. White clover is nearly all dead, so I can hardly anticipate a good honey year.

Moline, Ills. W. P. ODENDAHL.

Protect the Bees.

We are having a very cold, backward Spring, and I fear many colonies of bees will die for want of food. All who keep bees should do what they can to secure the passage of a bill making it a misdemeanor to spray trees and shrubs while in bloom. We often see it stated that all who wish to make fruit-culture a success, should spray their trees, and sometimes nothing is said as to the time for spraying. An angry neighbor, who wished to harm the bees, and did not want to be bothered with them, could easily kill them under pretense of spraying his trees. Such a bill should be passed at once, and no bee-keeper should be satisfied until he is protected by law. You are giving us a splendid bee-periodical. MRS. L. C. AXTELL.

Roseville, Ills.

Bee-Keeping for Profit, by Dr. G. L. Tinker, is a new 50-page pamphlet, which details fully the author's new system of bee-management in producing comb and extracted-honey. and the construction of the hive best adapted to it—his "Nonpareil." The book can be had at this office for 25c.

Please send us the names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you.

Wavelets of News.

One Paying Colony of Bees.

At the last meeting of the Farmers' Institute at Garden City, Kans., it was shown that alfalfa, in Finney county, gives abundance of seasonable flora for bees. One farmer paid $10 for a colony of bees, last year, and thought that a high price. But during the season he took from it 40 pounds of honey, which had a market value of $10; thus his bees boarded themselves, and paid first cost in one season.—*Field and Farm.*

Box-Hives and Honey Gathering.

A Texas correspondent wishes to know how to get bees in a gum or box-hive to store honey in some receptacle where it can be easily obtained. This is rather uncertain business.

About the only way that promises success, is to put a box on top of the hive. I would use a box that would hold 30 or 40 pounds; then make a hole on top of the hive 3 or 4 inches in diameter.

First, smoke your bees, then bore an auger hole; then smoke them until the bees will let you work out a hole the right size; then, if you have a little empty comb, fasten it in the top of the box by means of melted wax; the bees will be more likely to work in it.

Fit the box perfectly tight on the top of the hive, even if you have to use clay or putty to stop the cracks. If I had your box-hives, I would transfer the bees into Langstroth or Simplicity movable-frame hives, and then you could do anything you wish with them, and if they gather more honey than they need, you could certainly get it. Then take the AMERICAN BEE JOURNAL, and you will soon be in a way to know all that can be known about bees. The writer keeps nearly 200 colonies of bees, and considers bee-keeping one of the most important industries of the country.—A. C. ATEN, in the *Home and Farm.*

Facts About the Queen-Bee.

A queen can beat a hen at laying. Give her the best surroundings, with plenty of honey coming in, and all that, and she will lay 3,000 eggs in 24 hours. She does not cackle over it, either. Each egg measures 1/14 of an inch in length, and 1/70 of an inch in thickness. Even when she is only doing an average business she will lay more than twice her own weight in 24 hours. But, mind you, she does not do anything else. Does not even feed herself. You will see the workers constantly offering her food.

NOT A QUEEN—ONLY A MOTHER.

You have read about a retinue constantly accompanying her and offering her homage. That is all moonshine.

Whenever she stops long enough in one place you will see a circle of bees with their heads turned toward her, but that set will never again circle about her; and when she makes her next stop, a new set will form about her, just the ones that happen to be nearest.

She has nothing to do with the government of the hive, so she is really not a queen at all—only a mother bee.

The workers feed her with concentrated food, so she has not much to do in the way of digestion. When not laying, however, I think she has to skirmish for herself, and get honey from the cells.

As a general rule, only one queen is in a hive, but it is not so rare a thing to find a mother and her daughter both laying in the same hive. But you may soon expect the mother to give out from old age.

It is the old queen that goes off with a first swarm; but, of course, a young one must go with anything after the first.—DR. C. C. MILLER, in *Stockman and Farmer.*

Feeding Bees in the Spring.

As I have had some experience in Spring feeding, I will give results: I have fed both sugar syrup and molasses. I have come to the conclusion that if I have to buy, it is just about as cheap to buy the best grade of sugar and make it into syrup and feed as to buy molasses to feed; but if I could get a poor grade of molasses very cheap, or had molasses in the house, if not burned I would feed it.

Bees will not take molasses at first, but after going several days to a feeding trough for sugar syrup, I add a little molasses, diluted as I do sugar, each day, until after a few days I can get them to take the feed half molasses, even if it is very poor stuff, and will cause no robbing. Yet I do not believe I would feed it in the hives—I mean very poor molasses—as it might not be taken, and would sour. I have always fed such poor feed out-of-doors. Last Spring I fed about two barrels of poor sorghum syrup that I could not use for cooking or on the table, mixed with about three barrels of sugar and honey, and yet I do not believe I would advise people to buy such feed for their bees, when they can get such nice granulated sugar for about 4½ to 4¾ cents by the barrel, and poorer grades cheaper still.

As to hurting the bees, I think they should not be fed a poor grade of sugar or molasses in the Fall or Winter, nor in early Spring until they fly freely. Good sorghum syrup, I believe, would be as good for them in April and May as sugar, and I would feed it by all means if I had it. But the bees would have to be taught to eat it, as I have before mentioned, by feeding but little at first, and adding more each day. I think it could be fed safely in the hive, as it would not sour any quicker than sugar syrup.

In feeding the poor syrups, if I fed at all, I would give less than two-thirds sugar and one-third of the poor syrup, as it might injure the bees if the syrup was very bad.—Mrs. L. C. Axtell, in an *Exchange*.

Dead-Air Space.

Many are advocating a dead air space about the bees during Winter, rather than chaff packing, as used by the older heads, claiming that the latter is not as beneficial to the bees as the former. The *Young Scientist* says: "If we have two spaces, each four inches thick, one with what is called a 'dead air space' and the other filled with some very light and porous material like chaff, the chaff-packed will have four or five times the non-conducting power of the air-filled space, and this whether it is around a bee hive an ice house, or a steam pipe." If the *Young Scientist* is right, and I believe it is, then some of our bee-keepers are wrong.—G. M. Doolittle, in *Rural Home*.

Removing the Winter Packing.

When the bees are flying nicely, the breeze in the south; snow all gone; and grass beginning to show green; take an empty hive, a smoker, a dust broom, a hatchet, a few nails, and a knife and begin.

Give the guards a whiff or two of smoke, and remove the lid. Pass down a little smoke, and take the top box away. Remove the combs, bees and all, into the empty hive; dump the remaining bees out on the ground in front of the entrance, and scrape all fragments of comb, knots of wax, etc., from the hive. Sweep it clean; drive a nail or two if needed, and replace on the stand; then I take one of the combs containing brood or honey and pollen, and shake the bees into the hive just cleaned; scrape the top-bar clean, cut the comb down to the width of the top-bar, and replace the bees in the clean hive on the stand. All combs not empty are treated in the same way. While handling these combs I find the queen and clip one wing, if not clipped before, and have all snugly replaced in the hive as before; clean and space more closely with an addition of a comb of honey, or syrup if needed, and a division-board inclosing all compactly to one side of the hive.

I now replace the carpet and packing, sometimes even the leaves or cushion, close the entrance in proportion to the strength of the colony, and I have as happy and lively a set of little folks as ever enjoyed a clean, easy, and warm home.

If the colony is strong, one may replace all the combs at once. If weak, he should do as above, and feed a half pint of syrup every evening at dusk, for a month or so. This stimulates the queen to lay, and builds up the colony rapidly. —E. H. Collins, in the *Indiana Farmer*.

Taking Bees Out of the Cellar.

The bees, of course, should be put out on the summer stands, if wintered indoors, as soon as the weather becomes reasonably warm and settled. Should it suddenly grow warm, this sometimes becomes a rather difficult and disagreeable job, as the bees now get very uneasy, and opening the doors a few times, with a glimpse of sunshine and a little warm air from outside, will make them crazy to get out.

At such times I find it a good plan to open the doors at night if the moon does not shine too brightly, and get up at 3 or 4 o'clock in the morning and put out from 30 to 50 colonies at a time.

It is not best to put out too many at a time, as they get more or less mixed up, and it does not tire one so much. Usually, too, there is really not so much hurry about getting them out as we think there is, and sometimes the weather suddenly turns cold and stormy, and we are glad we left them in the cellar yet awhile.

To keep the bees from rushing out of the hives in carrying them out, it is a capital idea to lay a cloth, dripping wet, in front of the entrance. This keeps them quiet and peaceable. A stick or dry cloth does not generally fasten them in well, and they manage to push it away and become quite irritable.

To make a nice carrier, take a couple of sticks about an inch square, and tack some strips of old grain sack between, leaving the sticks just far enough apart to slip over the cleats of the sides of the hive. Of course the sticks should be a little longer than the hive, and it is to be carried by two persons, each taking hold of the cloth at the ends with one hand.

Perhaps Dr. Miller's cloth arrangement is just as good for some kinds of hives. If you have not tried some such method, you will be surprised how nicely it works, and you will never again carry hives by the bottoms, twisting your hands and walking sidewise.—C. H. DIBBERN, in the *Plowman*.

What Bees to Buy.

Spring is the best time of year to purchase bees, as there is a chance, at least, of realizing upon the investment, while if obtained in the Fall by a novice, they may perish before flowers bloom. Bees can be safely shipped long distances, but everything considered, I would purchase near home, if the variety of bees and hive preferred, can be obtained there. And then there is no risk of buying a "pig in a poke." Do not choose a hive because it is heavy; you do not want honey, but bees. If you want to buy honey, get it in sections.

Do not choose a hive because there are many bees at the entrance, for in this I have seen would-be purchasers deceived. Such hives may be queenless, and the bees, having nothing to do, no brood to feed or water to carry, lounge and gossip at the front door. If bees are working, choose a hive whose bees are rushing in and out with the greatest possible dispatch; if not, one that has the most bees between combs.—*Orange Judd Farmer*.

Get Ready for a Big Crop.

If you are ready for it, and it does not come, there is no great harm done. If you are not ready, and it does come, then there is harm done. You will get all in a stew right in the middle of harvest, and instead of being just running over with gratitude for having such a big crop, you will grumble at the supply dealers because they do not start your supplies on the road about two hours before you mail your order, snap up your wife when she asks you to stop long enough for dinner, and make yourself such a nuisance generally that you will want to get away from yourself. Get ready in time.—*Gleanings*.

CLUBBING LIST.

We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

	Price of both.	*Club.*
The American Bee Journal......	$1 00....	
and Gleanings in Bee-Culture....	2 00....	1 75
Bee-Keepers' Guide.....	1 50. ..	1 40
Bee-Keepers' Review........	2 00....	1 75
The Apiculturist.............	1 75....	1 65
Canadian Bee Journal.......	1 75 ...	1 65
American Bee-Keeper.... ..	1 50....	1 40
The 7 above-named papers	6 00....	5 00
and Langstroth Revised (Dadant)	3 00....	2 75
Cook's Manual (1887 edition)	2 25.. .	2 00
Quinby's New Bee-Keeping.	2 50....	2 25
Doolittle on Queen-Rearing.	2 00....	1 75
Bees and Honey (Newman)..	2 00....	1 75
Biuder for Am. Bee Journal.	1 60....	1 50
Dzierzon's Bee-Book (cloth).	3 00....	2 00
Root's A B C of Bee-Culture	2 25....	2 10
Farmer's Account Book.....	4 00....	2 20
Western World Guide	1 50....	1 30
Heddon's book, "Success,"..	1 50....	1 40
A Year Among the Bees	1 50....	1 35
Convention Hand-Book......	1 50. ..	1 30
Weekly Inter-Ocean.........	2 00....	1 75
Toronto Globe (weekly).	2 00....	1 70
History of National Society.	1 50....	1 25
American Poultry Journal..	2 25....	1 50
The Lever (Temperance)	2 00....	1 75
Orange Judd Farmer........	2 00 ...	1 65
Farm, Field and Stockman..	2 00....	1 65
Prairie Farmer..............	2 00...	1 65
Illustrated Home Journal ..	1 50....	1 35
American Garden	2 50....	2 00
Rural New Yorker	2 50....	2 00
Nebraska Bee-Keeper.......	1 50....	1 35

Do not send to us for sample copies of any other papers. Send for such to the publishers of the papers you want.

☞ I am well pleased with the Sewing Machine you sent me; any person wanting a good Sewing Machine, one that is equal to the high-priced machines which are sold by agents, can do no better than to send for your $15.00 Machine. They will be agreeably surprised when they see it. Mine is really better than I expected.

W. J. PATTERSON.

Sullivan, Ills., Dec. 5, 1890.

* * *

☞ The Union or Family Scale has been received, and I am much pleased with it.

W. H. KIMBALL.

Davenport, Iowa.

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OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

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BUSINESS MANAGER.

Special Notices.

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☞ Send us *one new* subscription, with $1.00, and we will present you with a nice Pocket Dictionary.

☞ The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to pay for another year.

☞ Systematic work in the Apiary will pay. Use the Apiary Register. It costs:

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 25
" 200 colonies (420 pages)	1 50

☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

The Convention Hand-Book is very convenient at Bee-Conventions. It contains a simple Manual of Parliamentary Law and Rules of Order for Local Bee-Conventions; Constitution and By-Laws for a Local Society; Programme for a Convention, with Subjects for Discussion. In addition to this, there are about 50 blank pages, to make notes upon, or to write out questions, as they may come to mind. They are nicely bound in cloth, and are of the right size for the pocket. We will present a copy for one new subscription to the BEE JOURNAL (with $1.00 to pay for the same), or 2 subscribers to the HOME JOURNAL may be sent instead of one for the BEE JOURNAL.

◆

The "Farm Poultry" is a 20-page monthly, published in Boston, at 50 cents per year. It is issued with a colored cover and is finely illustrated throughout.

We have arranged to club the AMERICAN BEE JOURNAL with the *Farm-Poultry* at $1.35 per year for the two. Or with the ILLUSTRATED HOME JOURNAL at $1.75.

◆

If you have a desire to know how to have Queens fertilized in upper stories, while the old Queen is still laying below—how you may *safely introduce* any Queen, at any time of the year when bees can fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact, everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and is as interesting as a story. Price, $1.00. For sale at this office.

◆

When talking about Bees to your friend or neighbor, you will oblige us by commending the BEE JOURNAL to him, and taking his subscription to send with your renewal. For this work we will present you with a copy of the Convention Hand-Book, by mail, postpaid. It sells at 50 cents.

◆

We Now Have a full stock of everything needed in the apiary, and can fill orders at a moment's notice. Order before the rush.

HONEY AND BEESWAX MARKET.

DETROIT, April 13.—Comb-honey is quoted at 15@16c; demand light. Extracted, 7@8c. Beeswax firm, at 28@29c.
M. H. HUNT, Bell Branch, Mich.

NEW YORK, April 13.—Market is bare of comb-honey. We quote: Extracted, buckwheat, 7@7½c; California, in good demand, at 6¾@7¼c, and market well supplied; Southern, none in market. Beeswax, 25@27c.
HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

KANSAS CITY, April 11.—Market continues about the same; stocks becoming light; no receipts. We quote: White 1-lb. comb, at 16@18c; dark, 12@13c; California white, 2-lb., 14@15c; extracted, 6@7c. No Beeswax in the market.
CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CINCINNATI, April 13.—Demand good for extracted-honey, at 6@8c; comb-honey in fair demand at 14@16c for choice, in a jobbing way. Beeswax is in good demand at 25@30c., for good to choice yellow.
C. F. MUTH & SON,
Corner Freeman & Central Aves.

CHICAGO, April 13.—Demand at present not very active on comb honey. Fancy white, 17c; white, 16c; white, 2-lb. sections, 14c; buckwheat, 1-lb. sections, 12c; extracted, 7@8c. Beeswax, 28c.
S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, April 13.—Fancy white 1-lb. comb, 18c; fair to good, 17c; dark 1-lb., 14@15c; 2-lb. white comb, 15@16c; 2-lb. dark, 13@14c; extracted, white, 7c; dark, 5@6c.
HAMBLIN & BEARSS, 514 Walnut St.

CHICAGO, April 13.—There is the usual Spring demand for honey, and best white continues to bring 17@18c; honey that is off in color and condition sells for 2@3c less; very little call for dark comb. Extracted, is selling at 7@8c, in cans or barrels. Beeswax, 27@28c.
R. A. BURNETT, 161 S. Water St.

BOSTON, April 13.—Honey is in fair demand; supply short. White 1-lb. comb is very scarce and wanted, at 18@20c: fair to good, 18@19c; 2-lb. sections, 16@17c. Extracted, 8@9c. Beeswax, 30c.
BLAKE & RIPLEY, 57 Chatham Street.

ALBANY, N. Y., April 13.—Honey market is slow, with small stocks of comb. We quote: White comb at 15@16c; mixed, 13@14c; dark, 12@13c. Extracted, light, slow at 7@8c; dark, firm at 6@7c. Beeswax, 26@30c.
H. R. WRIGHT, 326-328 Broadway.

Remember the *sad* experience of last season! Everyone should order all the Supplies necessary for the Apiary *at once*, and avoid "the rush." The delays and annoyances of last year should teach a valuable lesson in this line.

A Nice Pocket Dictionary will be given as a premium for only **one new** subscriber to this JOURNAL, with $1.00. It is a splendid little Dictionary—just right for the pocket. Price, **25 cents.**

Wants or Exchanges.

Under this heading, Notices of 5 lines, or less, will be inserted at **10 cents per line**, for each insertion, when specially ordered into this Department. If over 5 lines, the additional lines will cost 20 cents each.

HELP WANTED IN APIARY—Single man; must have experience extracting honey; not afraid of bees. Must be able to get along lively when necessary, not dissipated, and must work cheap: State experience and wages wanted.
E. DRANE & SON,
16A2t Eminence, Ky.

WANTED—To exchange 1-lb. thin Vandervort f'd'n for 2 of wax. Samples and testimonials free. C. W. DAYTON, Clinton, Wis.
8A10t

WANTED—Pure Italian Queens, Sections, on offers for Pure Plymouth Rock Eggs, or Quinby Hives (corner clasps).
16A1t L. C. AXTELL, Roseville, Ills.

WANTED—To Exchange—Bronze Turkey Eggs for comb-foundation; $3.00 per 13.
16A1t J. C. PROVINS, Masontown, Pa.

WANTED—Bees in exchange for Supplies or cash. F. C. ERKEL, LeSueur, Minn.
16A1t

FOR SALE—A good B. B. Red Game Cock. Write at once for price. Address
16A1t C. A. BUNCH, Nye, Ind.

WILL EXCHANGE Foundation for Wax or cash; will also make wax into foundation when sent to me, at the lowest price in the world. Send for samples and prices to JACOB WALLERSHEIM, Kaukauna, Wis. 13A4t

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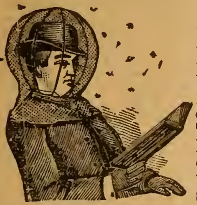

The "Globe" Bee Veil

Price, by Mail or Express, $1.00.

There are five cross-bars united by a rivet through their center at the top. These bars are buttoned to studs on the neck-band. The bars are of best light spring steel. The neck-band is of best hard spring brass. The cover is of white bobinet with black face-piece to see through.

It is very easily put together; no trouble to put on or take off; and folds compactly in a paper box 6x7 inches, by one inch deep. The protection against bees is perfect—the weight of the entire Veil being only five ounces.

Extra Nets, 25 cents each.

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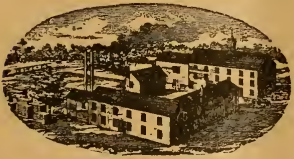
246 East Madison Street CHICAGO, ILL.



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8Etf
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I. C. SMITH, Lone Tree Lake, Minn.
14E4t

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And the Race is Won by the Albinos, which outstripped even the Italians in gentleness, beauty, honey-gathering and the prolificness of Queens. This race of bees was brought about by the reproduction of an Italian sport, and greatest care has been taken to get them pure, and the result is a race of bees that ranks first in the bee-world. Try one of these Queens. Descriptive Catalogue free.

A. L. KILDOW,
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Our A B C of Bee-Culture is a cyclopedia of 420 6x10 pages, handsomely illustrated with over 300 engravings. It has had frequent and thorough revisions, and has had the enormous sale of 42,000 copies in 11 years; 10,000 more are in the press. Price, in cloth, $1.25, postpaid. Clubbed with Gleanings, $2.00.

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Send for our **52-page Catalogue of Bee-Keepers' Supplies** of every description, free on application.

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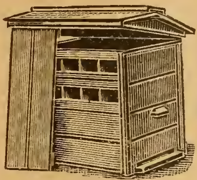

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☞ Send for Price-List.

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BEES Always Profitable by the Double Hive, Non-Swarming System. Simple, Practical. Full description, post-paid, 25 cents.

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Send 6c Stamps for descriptive Catalogue and Testimonials of persons cured of Rheumatism, Nervousness, Synovitas, and all exhaustive Chronic Diseases, by Dr. Gregg's ELECTRIC APPLIANCES. The **only Standard Goods** of the kind in the world. **Sold by Druggists everywhere.** Address

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On and after Feb. 1, 1890, we will sell our No. 1 V-groove Sections in lots of 500 as follows: Less than 2,000 at $3.50 per thousand; 2,000 to 5,000 at $3.00 per thousand. Write for special prices on larger quantities. No. 2 Sections $2.00 per thousand. Send for Price-List for other Supplies. Address,

J. STAUFFER & SONS,
Successors to B. J. Miller & Co.)
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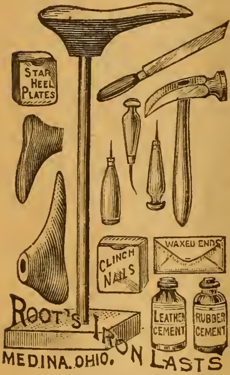
Mention the American Bee Journal.

Wet Feet, a Cold, Doctor's Bill

DEATH AND FUNERAL EXPENSES,
COST ABOUT **$200.**

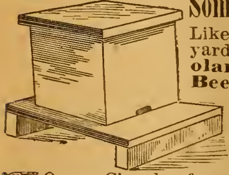
Root's Household Repairing Outfit.

Costs **$2.** Take your choice.



This Outfit is a combination of practical, tried, common sense Tools and Materials that will enable anyone with ingenuity enough to drive a nail, to do his own half-soling, boot, shoe, rubber and harness repairing, right at home. No pegs required. Simple wire clinch nails. Saves time, trouble, expense and vexatious "shoemaker's promises." Entire Outfit, neatly boxed, only **$2.00.** Send for descriptive Circular to

THOMAS G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.,
BY WHOM IT IS FOR SALE.



Some 400 Little Hives

Like this are used in our yards for rearing **Carniolan & Italian Queen Bees.** All Queens strictly pure and first-class in every respect. Satisfaction guaranteed—Safe arrival to all parts of Continent. ☞ Queen Circular free. E. L. PRATT, Pratt Bee-Farm, BEVERLY, MASS. 10Atf

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ITALIAN BEES AND QUEENS.
Address OTTO KLEINOW, 150 Military Ave., Detroit, Mich. 15A2t

Mention the American Bee Journal.

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A **PAMPHLET,** treating of the taming and handling of bees. Just the thing for beginners. It is a chapter from **"The Hive and Honey-Bee, revised."** Price, **8 cts.** Advice to beginners, Circulars, &c., free.

CHAS. DADANT & SON,
1Atf Hamilton, Hancock Co., Ills.

CUT RATES!

IN ORDER to reduce my stock of Bee-Hives, I will allow a 15 per cent. discount. I guarantee them to be of first-class lumber and workmanship. Write, stating number and kind of Hives wanted. Buy direct of the manufacturer. **C. K. READING,**
15A2t DAVENPORT, IOWA.

WHEN ANSWERING THIS ADVERTISEMENT, MENTION THIS JOURNAL.

DON'T READ THIS

For You will be too Late, if you don't send in your order at once, as in two weeks the offer of a **Tested Queen Free, will be withdrawn.** I want my Bees and Potatoes tried in **every State,** and will give a Queen absolutely free. Of the 60 or more free Queens offered to the United States, Canada, etc., only eight have been applied for, and **Michigan has not sent in an order.** as yet, **for the Selected Tested Queen.** For further particulars, see my ad. on **page 404, March 24, issue of this Journal.** Send $2.00 at once for 1-lb. each of my Potatoes. This is virtually the price of the Queen, and if you are **first, I will send you a Queen** that **will please you,** or I will **return your money.** In addition, I will also give all a Certificate good for **75** cents, that will be accepted on an order of a **single Queen at face value.** See my ad. on page 404, and remember this offer will be **withdrawn in two weeks.** After that you will be **too late.**

JACOB T. TIMPE, Grand Ledge, Mich.
14Atf

Mention the American Bee Journal.

MUTH'S

HONEY EXTRACTOR
PERFECTION
Cold-Blast Smokers,
Square Glass Honey Jars, &c.

For Circulars, apply to CHAS. F. MUTH & SON, Cor. Freeman & Central Aves., Cincinnati, O. Send **10c** for Practical Hints to Bee-Keepers.
1Atf

ADVANCE IN PRICE

—OF—

COMB - FOUNDATION

On and after this day, the price of **COMB-FOUNDATION** is advanced

Three (3) cents per Pound

Both Wholesale and Retail,

on account of the scarcity and consequent enhanced value of Beeswax.

CHAS. DADANT & SON,
THOMAS G. NEWMAN & SON.
April 2, 1891.

British Bee Journal

AND BEE-KEEPERS' ADVISER.

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THE AMERICAN BEE JOURNAL
CIRCULATES
ALL OVER THE WORLD
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVII. April 23, 1891. No. 17.

Editorial Buzzings.

Whatever you have to say, my friend,
Whether witty, or grave, or gay,
Condense as much as ever you can,
And say it in the readiest way ;
And whether you write of rural affairs,
Or matter and things in town,
Just take a word of friendly advice,
Boil it down.

◆

Deadly.—All the yellow fever and cholera that ever prevailed in this country was not equal in fatality to *la grippe* during the past sixteen months.

◆

When Dividing, give full sheets of comb-foundation in the brood-frames having no combs. It will encourage the bees to work.

◆

The Wisconsin Foul-Brood Bill has passed the Senate, and our friend, Hon. B. H. Standish, who is the Chairman of the Committee to whom it was referred, is one of the principal apiarists of that State. There is but little doubt of its becoming a law, being in the hands of such a clever and successful manager as Mr. Standish.

Bee-Keepers' Union.—Mr. E. France had an article in *Gleanings* for March 1, combatting the idea of the Union being absorbed in the North American Bee-Keepers' Association. He did not seem to understand that the Union is already a part and parcel of that association, so far as its influence and protective care is concerned. We hope to find room for Mr. France's article soon.

Mr. E. R. Root added these very complimentary words — still erroneously thinking, however, that the mantle of the association was not extended over the Union :

> I can agree with friend France, in regard to the inadvisability of merging the Bee-Keepers' Union into the North American Bee-Keepers' Association. Under its present management, and with its small membership, the Union has done a magnificent service. Could it do better under the wings of the North American ? I doubt it.
>
> It is true, there is a kind of ignorant prejudice that some farmers and others have, that bees injure their apple crops. At our Shane yard, located in an orchard, an old farmer intimated that, since the bees had been there, they had not been able to get any apples. I showed him that there were others who had no bees near them who got no better crops. The facts were, if the bees were removed entirely the crop would not be as good. It is a remarkable fact, that, whenever there is a good yield of buckwheat honey, there is always a good crop of grain. A good yield of honey is accompanied by a moderate yield of grain.

◆

Canton, a city of Fulton county, Ills., is now in commotion. Complaints have been made to the Mayor against the bees belonging to Mr. G. W. Cole. They are branded as a "nuisance." The facts are, however, that the opposition grows out of ignorant jealousy, which should be promptly rebuked by all justice-loving people. The Mayor and councilmen have all been dosed with the full text of the arguments of Judge Williams, of Arkansas, proving that bees are not a nuisance, *per se*. We await results.

The Foul-Brood Bill was introduced into the Illinois Legislature by Hon. W. S. Smith, of Macon, on April 9, 1891. It was then read by title, ordered printed, and referred to the Committee on Retrenchment. The bill is entitled "A Bill for an Act for the suppression of foul-brood among bees, and making appropriation for the expenses of the work," and reads as follows:

WHEREAS, Bee-keeping is a large and growing industry in the State of Illinois, and worthy of protection and encouragement; and

WHEREAS, The bee-keepers of the State have petitioned the General Assembly to levy a tax on each stand [colony] of bees, the revenue therefrom to be used in the suppression of foul-brood among bees, and the promotion of the bee-keepers' industry; therefore,

SECTION 1. *Be it enacted by the People of the State of Illinois, represented in the General Assembly*, That the Illinois Bee-Keepers' Association shall, at each annual meeting, or the Directors of said association shall, if during the interval between two annual meetings the occasion should arise, appoint a State Inspector of apiaries, and such number of Assistant Inspectors as the exigencies of the service may from time to time require.

SEC. 2. The Assistant Inspectors may, when so directed, as hereinafter provided, perform all the duties and exercise all the powers conferred by this act, and delegated hereby to said State Inspector.

SEC. 3. The State Inspector or Assistant, on entering upon any premises in the discharge of his duties shall, if so required, produce the certificate of the President of the said association, that he has been appointed as such Inspector or Sub-Inspector, as the case may be.

SEC. 4. The said State Inspector and Assistant Inspector shall hold office for one year from the date of the annual meeting at which they were appointed; or, if they have been appointed by the Directors, then until the next annual meeting after such appointment, and shall be eligible for re-election, but the said State Inspector or Assistant Inspector may at any time, subject to the approval of the Governor, be removed from office by the Directors for neglect of duty, or other sufficient cause, and in case of such removal, the Directors shall, without delay, appoint a successor.

SEC. 5. The said Inspector shall, whenever so directed by the President of the Illinois Bee-Keepers' Association, visit, without unnecessary delay, any locality in the State of Illinois, and there examine any apiary or apiaries to which the said President may direct him, and ascertain whether or not the disease known as "foul-brood" exists in such apiary or apiaries; and whenever the said Inspector shall be satisfied of the existence of foul-brood in its virulent or malignant type, it shall be the duty of the Inspector to order all colonies so affected, together with the hives occupied by them, and the contents of such hives, and all tainted appurtenances that cannot be disinfected, to be immediately destroyed by fire under the personal direction and superintendence of the said Inspector; and after inspecting infected hives or fixtures, or handling diseased bees, the Inspector shall, before leaving the premises, or proceeding to any other apiary, thoroughly disinfect his own person and clothing, and shall see that any Assistant or Assistants with him have also thoroughly disinfected their persons and clothing: *Provided*, that where the Inspector, who shall be the sole judge thereof, shall be satisfied that the disease exists, but only in milder types, and in its incipient stages, and is being, or may be treated successfully, and the Inspector has reason to believe that it may be entirely cured, then the Inspector may, in his discretion, omit to destroy, or order the destruction of, the colonies and hives in which the disease exists.

SEC. 6. The Inspector shall have full power, in his discretion, to order any person or possessor of bees dwelling in box-hives in apiaries where the disease exists (being mere boxes without frames) to transfer such bees to movable-frame hives within a specified time, and in default of such transfer, the Inspector may destroy or order the destruction of such box-hives and the bees dwelling therein.

SEC. 7. Should the owner or possessor of diseased colonies of bees, or of any infected appliances for bee-keeping, knowingly sell, barter, or give away, any such diseased colonies or infected appliances, he shall, on conviction before any Justice of the Peace, be liable to a fine of not less than $50 nor more than $100, or to imprisonment for any term not exceeding two months.

SEC. 8. Should any person whose bees have been destroyed, or treated for foul-brood, sell, or offer for sale, any bees, hives, or appurtenances of any kind after such destruction or treatment, and before being authorized by the Inspector so to do, or should he expose in his bee-yard, or elsewhere, any infected comb, honey, or other infected thing, or conceal the fact that said disease exists among his bees, he shall, on conviction before a Justice of the Peace, be liable to a fine of not less than $20 and not more than $50, or to imprisonment for a term not exceeding two months and not less than one month.

SEC. 9. Should any owner or possessor of bees refuse to allow the Inspector or his Assistant or Assistants to freely examine said bees, or the premises in which they are kept, or should such owner or possessor refuse to destroy the infected bees and appurtenances, or permit them to be destroyed when so directed by the Inspector, he may, on complaint of the Inspector, be summoned before a Justice of the Peace, and on conviction, shall be liable to a fine of not more than $50 nor less than $25 for the first offense, and not more than $100 nor less than $50 for the second and any subsequent offenses; and the said Justice of the Peace shall make an order directing the said owner or possessor forthwith to carry out the directions of the Inspector.

SEC. 10. Where an owner or possessor of bees shall disobey the directions of the said Inspector, or offer resistance to or obstruct the said Inspector, a Justice of the Peace may, upon the complaint of the said Inspector, cause a sufficient number of special constables to be sworn in, and such special constables shall, under the directions of the Inspector, proceed to the premises of such owner or possessor, and assist the Inspector to seize all the diseased colonies and infected appurtenances, and burn them forthwith; and if necessary the said Inspector or constables may arrest the said owner or possessor, and bring him before a Justice of the Peace, to be dealt with according to the provisions of this act.

SEC. 11. Before proceeding against any person before a Justice of the Peace, the said Inspector shall read over to such person the provisions of this act, or shall cause a copy thereof to be delivered to such person.

SEC. 12. Every bee-keeper or other person who shall be aware of the existence of foul-brood, either in his own apiary or elsewhere, shall immediately notify the President of the Illinois Bee-Keepers' Association of the existence of such disease, and in default of so doing shall, on summary conviction before a Justice of the Peace, be liable to a fine of $5 and costs.

SEC. 13. Upon receiving the notice in the preceding section metioned, or in any way becoming aware of the existence of foul-brood in any locality, the said President shall immediately direct the said Inspector to proceed to and inspect the infected premises: *Provided*, that when the person giving such notice is unknown to said President, or there is reason to believe that the information in said notice is untrustworthy, or that the person giving such notice is actuated by improper motives, then the said President may require the person giving such notice to deposit the sum of $5 with the President, as a guarantee of good faith, before the said notice shall be acted upon, and [if] it shall prove that said notice was properly given, then the said deposit shall be returned to the person giving such notice, but otherwise the said deposit shall be forfeited to the use of the said Illinois Bee-Keepers' Association.

SEC. 14. The said association shall include in its annual report to the Governor a statement of the Inspector's work during the preceding year, which statement shall include the number of colonies destroyed by order of the Inspector, and the localities where found, and the amount paid to him for his services and expenses for the preceding year.

SEC. 15. The Directors of the said association may, from time to time, make such by-laws and regulations for the control and guidance of the Inspector in carrying out the provisions of this act as they may deem necessary; and the said Directors shall also by by-law fix the amount of the remuneration of the said Inspector and Sub-Inspector, but all such by-laws and regulations shall be subject to the approval of the Governor.

SEC. 16. It shall be the duty of each assessor, at the time and in the same manner as other property is listed for taxation, to require each owner of bees to specify on the schedule containing his or her assessed property, the number of stands [colonies] of bees in his or her possession, which information the assessor shall add up and note in his assessment book under proper headings, with the footings given in the space provided for the aggregates.

SEC. 17. There shall be annually assessed and collected, at the same time and in the same manner as other State taxes, 5 cents on each stand [colony] of bees, which tax shall be paid into the State treasury at the same time and manner as other State taxes, and be used for the suppression of foul-brood among bees, and the promotion of the apiarian industry of the State, as may be, from time to time, voted by the Illinois Bee-Keepers' Association, and approved by the Governor.

SEC. 18. The revenue derived from the operations of this statute, or so much thereof as may be necessary for the purposes specified in the foregoing section, is hereby appropriated to defray the expenses contemplated by this act, to be paid by the State Treasurer upon warrants drawn by the Auditor of the State, which warrants shall be drawn only upon vouchers and bills signed by the President of the Illinois Bee-Keepers' Association, countersigned by the Secretary thereof.

In England the season is reported by the *British Bee Journal* to be "all that one could wish." Spring has arrived in good earnest, and "the time for the singing of birds has come," the bees are merrily buzzing and bringing in pollen. The *British Bee Journal* thus refers to the matter:

> Luckily for colonies which have lost heavily in bees this Winter, the warm weather of February did not last long enough to induce breeding to any considerable extent, otherwise the cold during the greater portion of March has been quite severe enough to cause shrinkage of already attenuated clusters, sufficient to make certain that, in some cases at least, chilled brood would have been inevitable. So far, however, as we can learn, no harm has been done, and the welcome return of cool weather has no doubt saved the lives of an enormous number of bees which would inevitably have perished had warmth accompanied the late boisterous weather of the early part of March. Any day, however, may see a wonderful change, and the season be on us before we can look around.

The following from the *Bee-Keepers' Record* on the same subject will also be read with interest:

> Bees have passed through one of the severest Winters on record, and are found to-day in better condition than for some years past. In confirmation of this assertion, we direct attention to the numerous reports in this issue, and it will be seen that in the all-round good condition of the great majority of our readers' apiaries, there is substantial cause for congratulation. A few days of much-needed warmth in February was followed by a "close" March—*close*, fortunately, in the sense of keeping bees in-doors, and thus avoiding the heavy losses often incurred when March has been a mild but boisterous month. Few bee-keepers can help feeling a pang when scores of bees, tempted by the treacherous warmth outside, are seen to leave their snug homes only to be carried off by the high wind, the force of which prevents their return, and this at a time when bee-life is so precious. The recent storms, however, have been productive of no loss in this way, for scarce a bee took wing while the fierce gales lasted.

Microbes, even though we think of them only as enemies, have uses in the world. They are friends as well as foes. Dr. Byron D. Halsted writes thus to the New York *Tribune* about their uses in the economy of Nature:

> A few years ago, when, with the advent of the better lenses, it was stated that all diseases would, in time, be found due to bacteria, it was then thought that these microscopic germs were only our enemies. Now the sight has deepened, and we conclude that we live, as well as die, by them. They are the minute scavengers of the world, and by means of their ever-presence and great rapidity of multiplication, the earth is kept sweet—or, at least, the bacteria do their part to remove filth by hastening decay.
>
> Within the past few years it has been found that the very important list of changes in the soil known under the name of nitrification, is due to the action of bacteria. They have gone further than this, and claim that the superior power that some plants, as the clovers, lupins, peas, and other leguminous crops, are able to draw upon special sources of nitrogen because of the bacteria associated with their roots. They find tubercles or small galls on the roots, which are the places where the bacteria breed.
>
> Let the study of these germs be prosecuted fully, for only good can come of it. It may be found that it will be unsafe to exclude bacteria from anything in which changes are desired.

Queries and Replies.

Caging the Queens for 2 or 3 Weeks.

Query 763.—Will it injure, in prolificness or otherwise, a young queen that has been laying a week or 10 days, to cage her for 2 or 3 weeks?—J. W. J.

Yes.—H. D. Cutting.

No.—Dadant & Son.

I think not.—A. B. Mason.

In my judgment, yes.—Mrs. Harrison.

I suspect it does a little, but not much. —C. C. Miller.

I do not know, but fear that it would. —C. H. Dibbern.

I think not; but possibly I am wrong. —Eugene Secor.

Not often, if she be kept at a proper temperature.—R. L. Taylor.

It would be likely to do her a permanent injury.—J. M. Hambaugh.

Perhaps. It will injure your business to make it a practice to do so, I think.—James Heddon.

All such prolonged caging has a tendency to weaken the prolificness of the queen.—J. P. H. Brown.

I would not like to risk it. Much would depend upon the manner in which she was caged, and upon her supply of food.—M. Mahin.

It would do her no good to so cage her, and unless I had some special reason for caging her, I should, by all means, let her have her liberty.—G. M. Doolittle.

I do not think so, but who knows for certain? Queens are often injured in shipping, but who will say that he can tell just how it happened?—A. J. Cook.

I do not think it does any harm to confine a queen 4 or 5 days, but I know of no necessity, except in shipping queens, to confine them for so long.—G. L. Tinker.

I do not think it will. I can see no reason, either, why it should. Young queens are carried from Maine to California—in fact the world over—without injury.—J. E. Pond.

According to my experience, yes. Young queens that are shipped in cages, being out no longer than from 2 to 4 days, will not live, on the average, as long as queens reared and kept at home at steady work, and queens that are one or more years old are worthless, except as breeders, if caged and shipped a few hundred miles. Such is my experience. —G. W. Demaree.

Much depends upon the care exercised in the transaction. While it may not injure the queen to cage her for 2 or 3 weeks, after she has commenced to lay, it should not be practiced unless there is an urgent necessity for doing so. When carefully put into properly provisioned cages, queens have been mailed to Australia, but nearly all of them are short lived, and many are injured more or less.—The Editor.

Transferring Bees, Etc.

Will Mr. Heddon please answer the following through the Bee Journal:

1. If that "forced or transferred" swarm (see page 472) may be expected to cast a swarm, after the "forcing" or "transferring?"

2. Does he still practice the plan outlined on page 126 of the Bee Journal for 1883, for preventing second swarms?

3. Should we place a colony, say, a week before swarming time, on top of a hive filled with empty combs, with a queen-excluding honey-board on top of the latter, would the colony cast a swarm, or try to? Hallett & Son.

In response to the questions of Messrs. Hallett & Son, let me say that the reply I shall make will not be suitable for an article in the Bee Journal.

1. Whether the forced swarm will cast a swarm or not, will depend upon the same peculiar local conditions which would govern the actions of a natural swarm. They are not apt to, in most localities, provided they are managed so as to prevent increase, if the owner does not desire any increase.

2. Yes; I always transfer by the new method, called modern transferring, whenever I have any transferring to do.

3. Yes; if they had previously arranged to do so. But, of course, the bees would return, as the queen could not go, and, when the young queens hatched, probably one of them would pass through the excluder, and out would come the swarm, to stay. But if the season was not favorable to swarming, and the bees had made no previous preparations, then probably they would not come out. But I do not believe in any of the *compulsory* methods to prevent swarming. The best methods are those which prevent the desire, and all preparation for swarming. It is much like the best method of guiding our children in the way they should go.

Dowagiac, Mich. James Heddon.

Topics of Interest.

Origin of Foul-Brood.

S. CORNIEL.

Mr. Robinson is to be commended for tacitly admitting the weight of the authorities I quoted to prove that there is no such thing as spontaneous generation, that there are no latent spores in living, healthy tissues, and that neither fermentation nor putrefaction can take place in the larvæ of bees, except such as is caused by microbes introduced from without.

The only error he attempts to defend by anything more than his own incoherent and rambling statements, is that the microbes of foul-brood do not harm mature bees. To support his contention, he correctly quotes Dr. Dzierzon as saying that "foul-brood, indeed, is a disease of the larvæ, and not of the emerged bees;" but the paper in the *Bienen Zeitung*, from which this quotation is taken, was written in 1857—that is 17 years before Prof. Cohn, or any one else, thought of looking for microbes in either bees or brood. Mr. Robinson might better have conceded this point with the others.

It is a pity that Mr. Robinson continues to claim that before his pretended discovery in 1882, it was not a well-established, and well-known fact that foul-brood is a germ disease, because to settle the matter now, once for all, I shall be obliged to strip him of his assumed honors as a discoverer, and place him in his true position.

Mr. Robinson says "I was the first who, in 1882, pointed out that foul-brood was the result of bacteria," and again he says, "Prior to 1882 no writer respecting foul-brood, in America or elsewhere, mentioned that foul-brood is caused by germs." Mr. Robinson either forgets, or presumes too much on the forgetfulness of his readers.

Within a short time previous to the announcement of Mr. Robinson's pretended discovery in 1882, Muth's Practical Hints, Kohnke's Foul-Brood, its Origin, Development and Cure; Dzierzon's Rational Bee-Keeping, and Quinby's Bee-Keeping Explained, were published, in each of which it is taught that foul-brood is the result of bacteria. There is an essay by Mr. C. F. Muth, in the AMERICAN BEE JOURNAL for 1879, and he has another in the same periodical for 1880, in both of which the cause of the disease is attributed to germs. In an essay on page 504, of the AMERICAN BEE JOURNAL for 1879, Dr. L. C. Whiting says: "The researches of Dr. Preusz, and others, lead to the opinion that the disease is caused by a microscopic fungus cryptococcus alveolario." On page 460 of the AMERICAN BEE JOURNAL for 1880, there is an essay on foul-brood by Mr. Kohnke, in which he says, "It is a process of putrefaction, induced by the presence of bacteria, a low form of animal life pervading the honey and the stomachs of the bees, the germs of which are so small that the slightest whiff will carry them, not only from one hive to another, but from one apiary to another."

In the face of the foregoing facts, published not in "far-off Europe," but at his very elbow, so to speak, how absurd it is for Mr. Robinson to say that, prior to 1882, no writer mentioned that foul-brood is caused by germs.

Mr. Robinson says: "Dr. Cohn did not make any experiments that demonstrated whether the germs that he espied under the lens were such as to originate foul-brood by contagion," and again "Dr. Cohn's discovery afforded no clue to a solution of the problem, and nothing came of it."

It should be borne in mind that in his experiment, in which he claims to have discovered that foul-brood is a germ disease, Mr. Robinson saw no germs, nor does he know, as a matter of observation, that there were any. He only inferred that they were present, presumably from reading of the discoveries made by more thorough investigators. We shall now see what came of Dr. Cohn's discovery.

At a gathering of bee-keepers held at Saltzborg, Germany, in the Spring of 1876, within two years after Prof. Cohn made his discovery, Dr. Dzierzon asked, "What is to be looked upon as decided relative to foul-brood, both as regards theory and practice, and what remains now undecided?" After discussion it was agreed that the following problems should be solved experimentally:

"First. It must incontrovertibly be proved that the spores of the fungus leave the dried up foul-brood, and they must, inasmuch as they float in the air, be capable of being caught."

"Second. It must next be shown that such fungus spores, that are caught in the atmosphere, when placed on healthy larvæ, can grow and increase to an unaccountable number, until at last they kill the brood, and so prove themselves the cause of the sickness."

To Dr. Shœnfeld was assigned the task of conducting the experiments for the solution of these problems. The Doctor's first step was to procure a specimen of foul-brood, which, on being submitted to microscopic examination, was found to have reached the spore condition. To ascertain whether these spores, when dry, would float in the atmosphere, and to catch them if they did, he constructed the following apparatus: On a smooth board he placed a bell-glass, in the top of which was a round hole; in this he fixed a glass tube two feet long. In a hole in the middle of the board he fixed a similar tube extending downwards. In the outer ends of these tubes he placed plugs of cotton wool loosely, so as to permit the passage of air, but tight enough to catch floating particles in the atmosphere.

Dr. Shœnfeld now placed the foul-broody matter under the bell-glass, and from time to time he exposed the glass to the rays of the sun in his study window. A circulation of air was thus set up, on the same principle that a stove "draws" when the fire is lighted. In about two weeks the foul-broody matter had become quite dry; every eight days or so he removed the plug from the upper tube and replaced it with a fresh one. Portions of these plugs, taken from the tube, were wetted with distilled water, when spores were found adhering to the fibres. When a drop of this water from the wool was examined under the microscope, it showed considerable quantities of spores. After examinations under the microscope, repeated so often that there could be no possibility of mistake, Dr. Shœnfeld considered the first problem solved; it being without a doubt proven that the spores from the dried-up matter of foul-brood escape, and are borne away by the atmosphere.

To solve the second problem, Dr. Shœnfeld fastened portions of the infected wool over healthy brood, and after some failures, caused by the bees throwing out both the wool and the larvæ covered by it, he finally succeeded beyond any doubt whatever in starting the disease of foul-brood. So there can be no longer any doubt that spores introduced from without infect healthy larvæ, and in the end kill them.

Dr. Shœnfeld says that when the putrid matter in a foul-broody hive becomes dried up, there is not a doubt that the spores must be driven out in large quantities by the fanners at the entrance. When air is driven out of a hive, an equal quantity of outside air rushes in, and if this ingoing air should happen to contain spores from an adjacent hive, or elsewhere, we can see how the disease might be started in a healthy hive without the presence of either dead brood, contaminated honey, or stray or robbing bees.

The above is only a very imperfectly condensed description of Dr. Shœnfeld's experiments, a full description of which may be found on page 279 of the AMERICAN BEE JOURNAL for 1876. It is well worth while going to some trouble to borrow, if necessary, the November number of the AMERICAN BEE JOURNAL for that year, in order to be able to read Dr. Shœnfeld's description in full.

After reading all Mr. Robinson's claims to priority of discovery, the reader will now be more than surprised to learn that, previous to the announcement of his pretended discovery in 1882, Mr. Robinson was aware of Dr. Shœnfeld's experiments. Here is the proof: In the *Bee-Keepers' Exchange* for 1882, page 201, I find the following characteristic sentence over Mr. C. J. Robinson's name: "Shœnfeld, of Germany, was the first who demonstrated by experiment—infected healthy brood with foul, and thus discovered that the poison (not disease) is transmitted from hive to hive." In the *Kansas Bee-Keeper*, for the following October, he makes a similar statement. I have no space for comments on Mr. Robinson's inconsistencies.

I should close here, but as I shall probably not have another opportunity, there are two statements in Mr. Robinson's letters which I wish to discuss, not for the sake of refuting Mr. Robinson, for I have now done with that gentleman, but because I observe that the same ideas have been advanced by other writers.

The first statement is that foul-brood is not found to any extent anywhere except in cold climates. It is an old acquaintance in sunny Italy, as some who have imported queens from that country know to their cost. Mr. A. J. King had to battle with it in Cuba. It is found in Utah, California, Indiana and Texas, and Mr. Muth says "it has made fearful progress in the South." In Australia and New Zealand there seems to be more of it than almost anywhere else.

The second statement is that when bee-keepers practice freeing their hives of dead brood, foul-brood will be a thing of the past.

M. Bertrand, editor of the *Revue Nationale d'Apiculteur*, an eminent authority, is reported as saying that "chilled brood has a great deal to do with spreading foul-brood. Chilled brood might exist without ever becoming foul-brood; but if there was chilled brood in a hive, and the conditions were favorable for the spores of foul-brood to get to it, then foul-brood would arise."

Mr. Grimshaw, a prominent contributor to the columns of the *British Bee Journal*, is reported as follows: "He quite believed in M. Bertrand's opinion, that chilled brood was very likely to result in foul-brood, and strongly advised that the brood-nest should not be disturbed in the sharp nipping time of Spring, but be kept well quilted. Brood that was decomposing just gave the very sort of soil which noxious bacilli, floating about in the air, were in search of—at least that was the opinion of bacteriologists. He should think that chilled brood was not a cause of the disease, but an accessory before the fact."

Mr. T. W. Cowan, editor of the *British Bee Journal*, writes: "I do not believe foul-brood can break out in any district if the germs of the disease are not present in that district; and it is only if the disease germs are in the district that chilled brood can form a nucleus for the spread of the disease. I am quite sure that in a healthy district, where the disease germs do not exist, foul-brood could not originate spontaneously, however much chilled brood there may be. I have known hives affected with foul-brood where there had been no chilled brood, and on the other hand apiaries perfectly free from it where large quantities of brood were chilled by incautiously spreading the brood in the Spring."

Some years ago Mr. D. A. Jones stated, at a convention, that he believed he could start foul-brood at will in any apiary, by decapitating the drone brood, and placing the combs containing the dead brood under a nucleus. He tried it in his own apiary later on, and failed, after doing everything he could think of to infect healthy larvæ by means of the putrid matter from the drone combs. He had the seed bed, but the seeds of the disease did not happen to be floating around in Beeton just then.

By keeping the hives free from dead brood, we shall avoid one of the means which assists the spreading of the disease, but if we rely on this alone for its extermination, we shall never be able to say that "foul-brood is a thing of the past."

Lindsay, Ont.

Do Not Give Your Honey Away.

M. M. BALDRIDGE.

Friend Heddon says he thinks consumers of extracted-honey will buy just as much at 10 cents per pound, when sugar is worth 4 cents, as when it is worth 8 cents per pound.

That is my belief, also, because it is my experience. But I will state the case stronger: Consumers will buy and use just as much extracted-honey at 10 cents, 15 cents, or 20 cents per pound, when sugar is worth *one* cent, as when it is worth *ten* cents per pound! Why? Simply because honey is not used generally for the same reason, the same purpose, nor as a substitute. The price of sugar should have no more influence on the price of honey, than *lard* has on the price of *butter*.

I do not see as the price of cane sugar, or cane syrup has any influence on the price of maple sugar, or maple syrup, when pure. Why? Because they are not used for the same purpose, nor for the same reasons, generally. Consumers use honey, maple sugar, and maple syrup for precisely the same reasons, so far as my experience goes, namely, the peculiar *flavor* they each possess.

Take away from honey, or maple, its peculiar flavor, and consumers would just as soon have cane syrup for table use. They would, in fact, prefer cane sugar to honey, or maple, for cooking or preserving purposes, at the same price per pound, and simply because cane sugar is richer in saccharine.

It is my belief that all who claim that the price of cane sugar should or will effect the price of honey, whether in the comb or extracted, have not yet learned how to present the facts about honey to consumers. It might pay them to serve an apprenticeship in the art of selling honey, with some one who is an expert at the business. They might then, perhaps, be surprised to learn how simple and easy it is to sell honey, especially extracted, to consumers at 15, 20, and even 24 cents per pound. The latter has been my price for the past six months, and I still adhere to it, notwithstanding the price of cane sugar has been reduced 2 cents per pound since April 1.

As a rule, I do not sell honey to consumers by the single pound, but only in 5-pound packages. Five pounds is my smallest package, and 10 pounds, or two packages, is the largest quantity I will allow any consumer, or family of consumers, to have at one time.

The gross weight of each package is 5½ pounds, and net weight 5 pounds. My price, without any exception, is $1.30 for the entire package, to rich or poor, white or black; but I give my patrons 10 cents for each empty package, if returned to me on day of delivery.

The package I now use, and have used for ten years or more, to hold my honey, is simply the common so-called 2-quart tin pail, with loose cover. This package answers every purpose for my family trade, and I ask for nothing better.

Many honey producers are surprised to learn that I am able to get 24 cents per pound for extracted-honey, when they have hard work—so they say—to get even 10 cents per pound, and they sometimes insinuate that I must deal with a very ignorant class of people. On the contrary, my very best patrons are the average in intelligence. They have sense enough, however, to know a first-class article of honey when they see it, and seem willing to pay me the price I ask for it.

St. Charles, Ills., April 11, 1891.

Managing an Apiary for Surplus Honey.

T. K. MASSIC.

I have given this matter considerable *thought*, and I would rather be called a thinker than a "hustler," but my friends often give me the latter name. I wrote the following for the *Farm and Fireside*, but I feel sure that it will interest many readers of the American Bee Journal, and so will give it to them:

In running an apiary for large yields of surplus honey, the first thing we want at the beginning of the honey flow is bees. We want to know how to have our hives literally "boiling over" with bees, for it requires *bees* to gather the nectar from the flowers. To get the bees at the proper time, we must have a prolific queen — one whose reproductive powers, or egg laying, we can manage to suit the time of our honey flow. We must also see that our bees are well supplied with plenty of stores, both honey and pollen, in early Spring, and well protected from the cool nights and early frosts by keeping the hives well protected with chaff or other suitable material.

As the danger of chilled brood from cold snaps begins to pass, we must commence to spread the brood-nest by inserting an empty comb in the middle, using caution lest we get ahead of the bees, and cause them to get more brood than they can protect in case a cool spell should set in. In a few days take the two outside frames containing brood and put them in the center, placing the two center ones on the outside. Repeat this a few times, and when all danger of chilled brood is past, take the frames containing the most brood and put them next to the sides of the hive, placing those containing the least brood in the center.

If there are not enough stores, feed a thin syrup made from granulated sugar. Place rye flour where the bees can have free access to it. They will carry this in, which answers for pollen in brood-rearing.

When the honey flow sets in, which is known by the bees commencing to whiten their combs along the top-bars, reverse your frames, and put on your sections, with starters or partly-built combs for "bait." If bees refuse to go into the sections, fill a section with comb containing drone brood, and place this in the center of your super. I know all this is not new, but the proper management during swarming time is where the main surplus crop is secured.

When I first commenced keeping bees I read in the bee-books and periodicals that when bees swarmed we must secure as many foragers with the swarm as possible. This was accomplished by moving the old hive to one side, turning it half way around and putting a new hive in its place, when a swarm issued. Every day the old hive was turned a little, so that on about the sixth day it faced in the same direction as the new hive containing the swarm. At about 12 o'clock, when as many of the bees were out as possible, the old hive was carried to a new location, so that the returning foragers would enter with the swarm.

This required too much labor, and I adopted a plan requiring no hiving-boxes or other swarming implements, giving much better results, and requiring much less labor. I clipped the wings of all my queens, and when a swarm issued, I caught and caged the queen, moved the old hive a few feet to one side, and placed a new hive in its place. I then took the super off the old hive, using a little smoke, of course, and set aside. I next took off the honey-board, and lifted out the two outside frames from each side of the brood-nest, with their adhering bees, and placed them in the new hive, breaking off all queen-cells, and again reversing the frames.

I then filled in between these four frames, four other frames (an eight-frame hive is best), filled with foundation, put on the honey-board and a new super of sections filled with foundation, and on this super I placed the super from the parent colony (old hive), and covered them up. By this time the swarm was returning, when I released the queen and let her run in with the swarm. I had them swarmed and hived at one operation, with very little labor, and the result was more honey from the swarm than under any previous management.

The object in putting into the new hive the four frames from the old one was two-fold. First, to get the working bees with the swarm; and second, to so reduce the strength of the parent colony that I would not be troubled with after-swarms—swarms issuing with virgin queens, the wings of which I could not clip, as they had never mated. I then carried the old hive to a new location, taking care of the queens as they hatched out, and giving frames as needed, so that the old colony built up strong and in good condition for Winter.

Last season when my first swarm issued I was away from home. My wife moved the old hive to one side, put a new one in its place, gave the swarm four empty combs, and left them thus until I could return and "fix" them.

I returned about sunset, and when I opened the hive I found a vast number of the cells on all the combs pretty well filled with the honey that the bees had brought in their sacs from the parent colony. Here was a valuable lesson accidentally learned. "If those bees had been given frames solidly filled with young brood or sealed honey, and only starters in the other frames, so that *not one empty cell* could have been found in the brood-nest, then they would have been compelled to deposit the honey in their sacs in the sections, and thus the *habit* of going 'up-stairs' would have been induced, which would have been kept up until the end of the honey flow."

This was my reasoning. I then changed my system to suit it. When my next swarm issued, I hived it on the plan given above, except that instead of giving them the outside frames, and frames of foundation, I selected four frames containing eggs or very young brood, or sealed solid with honey, and placed between them four other frames with ½-inch starters. It would be several days before any of the brood would hatch, and as fast as the bees built comb from the starters the queen was ready to deposit it full of eggs.

In one hour the bees were working lively in the sections, just as I had calculated they would, and kept working in the sections to the end of the season. This plan works to my entire satisfaction with the invertible, hanging frame. In using the invertible and divisible hive, with closed-end frames, a slight change in the above plan would have to be made.

Now, why fuss with "swarming boxes" and other expensive, unnecessary and annoying implements, and then be mortified at having your surplus crop cut short, and your best queens and most valuable swarms abscond, when an inexpensive and much better plan can be adopted—one that will require much less labor, save the climbing and cutting of valuable trees, the loss of fine queens and swarms of bees, and *give more honey?*

Concord, W. Va.

Apicultural Notes from Alabama.

EDWARD CLARK.

Drones were flying on April 7.

The apple and peach trees have been in bloom for several days.

The bees are gathering pollen and honey from maples, which have been in bloom since the early part of March.

The persimmon tree, which blooms from the latter part of May until late in June, is, I think, a very good honey-producer.

After the persimmon, the sourwood blooms, and continues in blossom until the middle of July; and following that the poplar, or tulip, blossoms.

There are numerous other trees and plants, from which the bees can gather honey and pollen, almost any time through the summer.

We have very little basswood or clover but sumac and golden-rod are quite plentiful, and there are many other flowers that yield honey.

I would like to ask, of what value is the sourwood as a honey-producer?

Nat, Ala.

[Of the sourwood, or sorrel tree, Prof. A. J. Cook says: As a honey tree, it is very highly esteemed; in fact, it is the linden of the South.—Ed.]

Uniformity of Honey-Sections.

DR. C. C. MILLER.

Your editorial advocating one size of sections, rings out no uncertain sound. I hope you may secure a full presentation of both sides, but in order to overcome difficulties, it is well to look them squarely in the face. So I will make mention of what occurs to me in the way of difficulty or objection.

Suppose the edict goes forth that a certain section is to be considered standard, and anyone who varies from that will be out of style. It may happen that the section that I am using differs a trifle from the standard, yet all my fixtures, hives, supers, etc., are arranged with reference to that size, and it will be difficult to get me to change them all for no other advantage than to be in the fashion. So large a number would be in this predicament, that the adoption of a standard would be no easy matter.

One who has never tried it has no idea of the trouble attending a change of size. It is a very common thing, and a very correct thing, to urge beginners to avoid having more than one kind of hive in the same apiary, and much the same argument will hold against more than one kind of section. For it is easily seen that the man who has been using a section of a certain size, will for some time be likely to have some of that size on hand after he changes to the standard.

But are there not some hives that in their nature demand a certain kind of section, from which it is almost impossible to change?

Some markets demand one thing and some another. Now, ought you to ask me, for the sake of uniformity, to make a change that will take money out of my pocket? If a two-pound section sells better than a one-pound—as we are told it does in some markets—and the bee-keeper feels convinced that he can get more pounds of honey in the larger size, it will be difficult to get that man to fall into line.

Again, would not the adoption of a standard size largely bar the way against future progress? If, to-day, some one finds out a shape or size of section manifestly superior to anything else in use, it may be adopted by a number at once, and gradually work itself into the position of greatest popularity. On the other hand, if only one section were in universal use, it would be almost impossible to make any change.

Bee-keepers are great for hobbies, and pretty strong in their prejudices. Smith is sure his section is better than Brown's, and Brown is equally sure that Smith's is inferior. If either one is adopted, is it likely the other will change? If that be universally the case, what difference will it make to adopt a standard? Will it be any more a standard than it is now, except in name?

Now, I have suggested these objections, and others will no doubt arise—how shall they be met?

Marengo, Ills., April 10, 1891.

[The fact that the regular size can be made and sold *cheaper* than odd sizes, will very materially assist in bringing about a uniformity in size. Nothing teaches a lesson more impressively than a financial argument, especially when that is illustrated by an every-day, practical experience. Odd sizes of sections cost the honey-producer one dollar per thousand more than the regular sizes. That money is simply thrown away.—Ed.]

Apicultural Notes from Nebraska.

J. M. YOUNG.

Have you got your supplies in readiness for the first honey harvest?

Bees have wintered well in this locality. I have lost one colony out of my entire number.

Do you take a bee-periodical? If not, you should subscribe for one at once. A good, progressive bee-keeper cannot get along without one.

Bees should be fed a little now, every day they take a flight; if for nothing else, it will encourage brood-rearing, and keep the colony in a healthy condition, and when the honey harvest comes, you will have plenty of workers to bring in the nectar.

For several years I have used a thick top-bar for my brood-frames, ⅜ of an inch thick, and even at this thickness my frames seldom ever sag—at least not enough to amount to anything, but perhaps the thick top-bar advertised so much, will be better. I shall try some of them this season.

The hives in my apiary are about 8 feet apart, each way, and in rows. Usually, I level up my hives perfectly, every Spring. A novice will perhaps ask why we are so particular; well, just put a frame of foundation in a hive that is not level, and then note the difference.

Now is the time to prepare something for the World's Fair, at Chicago. Every State in the Union should do its level best to be represented there, and show to the world what can be done for the "little busy bee," that improves every shining hour. Commence *now* to prepare something fancy.

While the Spring will be late in this latitude, the indications are that a good honey season is before us. Plenty of snow in March, and some rain, has made the ground so wet that an abundance of early flowers are expected. White clover will certainly afford a good harvest this year.

Scarcely a single pound of comb-honey is obtainable in our city at present—in fact, there has been but little on the market all Winter. My crop of this article was all sold early in the Winter, and but little has been shipped in from other places.

Very little extracted-honey is used, except what is sold by peddling from house to house. Comb-honey is sold in 1-pound sections, and extracted-honey is put up in 1-quart fruit-jars, and a little in cans.

Plattsmouth, Nebr., April 13, 1891.

Comb-Honey and Out-Door Wintering.

GEO. H. KIRKPATRICK.

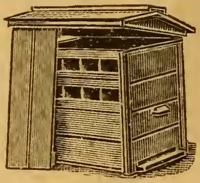
As many of the readers of the BEE JOURNAL are, perhaps, undecided as to what hive, or what make of hive they will use the coming season, a few words on this subject may be of interest to them.

It is an undisputed fact, that most apiculturists who are keeping bees for profit, demand a cheap, simple, practical hive. Shall this be a single-walled or a chaff hive, and shall it contain 8 or 10 Langstroth frames, is a question not so easily decided.

If the single-walled will do and 10 frames are wanted, then the 10-frame Langstroth hive is, perhaps, the right hive. If only 8 frames are wanted, then we need look no further than the dovetailed hive.

Now, either of the above hives are practical, but they must be protected, if wintered out-doors, or, if in the cellar, Spring protection is needed. It has been suggested by Ernest R. Root, of Medina, Ohio; R. F. Holtermann, of Romney, Ont.; and others, that an outside case be made for the purpose of protecting single-walled hives in Winter, but some predict that such cases will never come into general use.

Well, what about chaff hives? I think this heavy, expensive chaff hive, such as has been on the market for years, with heavily packed walls, requiring two men to move one, on account of the great weight and bulk, will never become popular with the majority of bee-keepers, although, by many, bees are reported to winter very well in them. But who will say that they are good hives for comb-honey? In my experience, I have found them very poor.



The thick, heavy walls retain the heat of the colony, and when the mercury is standing at from 85° to 100°—which is a very common temperature during a good honey-flow—the bees are driven from the hives to prevent the destruction of the combs. Why, it seems to me that such thick walls are worse than useless, as they prevent a free ventilation of the hive in Summer, and also prevent the warmth of the sun from reaching the bees in early Spring. And this warmth I consider quite an advantage, especially after brood-rearing has commenced.

Another objection to this heavy chaff hive, is its double-bottom. By a thorough test for a series of Winters, I have proven to my own satisfaction, that a double-bottom is useless; for if the hive rests as near the ground as it should, the packing will become damp; when if a single ⅞-inch board is used, the hive bottom will remain dry, other conditions being right.

As I have now spoken of three different hives, and mentioned a few points which seem to me as not being altogether practical, I will give a short description of my 8-frame chaff hive:

This hive I have used for four years, and it has proven to be complete in every respect, especially for comb-honey and out-door wintering. It is arranged with a 2-inch space around the brood-chamber, which may be packed, or left unpacked—I prefer it unpacked. This hive is a very easy one to handle, weighing less than a two-story Simplicity, and it is arranged with handles on each end, which are very convenient. (See cut above.)

I make this hive to receive the dovetailed furniture, although it will receive any of the standard surplus arrangements in use. In order that I may make it light and strong, I build it of re-sawed lumber, and secure the corners by first nailing the siding to a corner-post and then clamping the corner still more solid by an outer corner-post sawed in an L shape, and nailed on the outside. The bottom is made of a single ⅞-inch board; the roof is made of re-sawed lumber, and covered with tin.

This hive has a side opening on the right-hand side, which lifts out half way down, or from the upper story only. In preparing a colony for Winter in this hive, the apiarist has only to see that the colony has plenty of honey, and then place a Hill's device on the brood-frames and a piece of burlap over that, then crowd down a good chaff cushion into the burlap, and the work is done.

I sometimes make a box, of re-sawed lumber, 4½ inches deep and large enough to cover the brood-chamber, and stretch and tack a piece of burlap over the bottom, fill it with chaff and place it on top. This answers very well, but not as well as a cushion.

Union City, Ind.

◆

An Idea Worthy of Consideration.

F. H. DEWEY.

Mr. A. N. Draper said at Keokuk: "People have had a good deal to say about keeping bees away from watering troughs. I will give you a secret that is worth them all: Take a weak solution of carbolic acid, and paint it around the edges of the trough, and then the bees will not bother your neighbors." This is recommended for experiment by the editor of *Gleanings*.

Hereupon the question arises, have we not a means, deducible from this hint, to check, if not prevent, robbing? When robbers are rampant, why not lay a piece of cloth, saturated with a solution of carbolic acid, along the alighting-board?

Will not inhabitativeness take the inmates past it, while it offends the senses of the intruders? The strength of the solution might depend upon the temper of the thieves.

When the honey-fumes from the hive are overcome, and the victimized colony recovers its equilibrium, this mischief dies. In this connection it might be well to add that the queen of a thievish progeny—bandits, pure and simple—had better be marked for execution, and supersedure before another season.

If a colony appears only liable to be robbed, an application of carbolic acid, of strength determined by test, might avert a sacking of the treasury. A looting of the hive would be more offensive than the fumes, and its use would not interfere with the hive work, as robbing is a sign and proof of idleness, as well as viciousness. Furthermore, we might ask, would a careful use of the acid, at the time of removing honey, be a safe-guard against impertinent bees.

The possible advantages are worth a little experiment. Besides, the acid is a specific for sores and cuts, and for poultry vermin. In addition, it is a reliable disinfectant, but is poisonous if taken internally, like white paint and some other materials in common use.

Westfield, Mass.

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Transferring from Box to Frame Hives.

L. HIGHBARGER.

I have noticed several inquiries in the BEE JOURNAL of late concerning transferring, and how and when to do it. I have done considerable of it, both on the Langstroth and Heddon plan, but I do not like either of them.

In the Langstroth, there is always too much brood destroyed in fitting the brood in the frames—that is, cutting the combs out and placing them in the frames—and in the second place, where there is honey, as there should be, it makes a smeary, disagreeable job, and if the greatest care is not exercised, it will induce robbing.

In the Heddon system I find that the old colony will cast a swarm nine times out of ten, if there was much brood at the time of drumming.

Mr. Heddon says that in 21 days after first drumming, you can drum again, as the last bee will be hatched. The worst trouble will be with the queens that will be hatched before the last bee is—that will cause a swarm to issue.

My way of transferring is easier, quicker, prevents swarming, and avoids the smearing of honey. Take a movable-frame hive, with nice, clean combs—if you do not have the combs, take full sheets of foundation to fill out the hive—cut a hole in the bottom of your frame hive the size of the inside of your box-hive, or old gum. You need a hammer, a chisel, and a long, thin-bladed knife.

Blow some smoke in the entrance of the old hive, take your chisel, gouge the wood from the nail-heads, and with the pincers draw the nails out; pry the top loose, so that you can get your knife in, and cut the combs loose from the top. Place your frame hive on top of the old hive or gum, close its entrance, and your work is done. It should not require more than half an hour.

In about ten days, examine the frame hive to see if the queen has gone up; if not, and the old hive is full of bees, give them a good smoking. Whenever you find sealed brood in the frame hive, you may know the queen is there. At any time during the Summer you can take the box-hive away, and put the frame hive in its place. Examine the combs in the box-hive, and if they are worth transferring do so, but if not, melt them into wax. Do this transferring at any time during the Summer, when your bees are strong.

Leaf River, Ills.

Texas State Bee-Keepers' Convention.

A. H. JONES.

The thirteenth annual session of the Texas Bee-Keepers' Association convened at the apiary of W. R. Graham, Greenville, Tex., April 1, 1891.

The convention was called to order by President Graham, at 10 a.m., with about 20 bee-men present.

Prayer was offered by Rev. I. H. Hightower, of Kingston.

The minutes of the last meeting were read and approved.

In a neat, fraternal speech President Graham bade the convention welcome to his home and hospitality.

Rev. A. Fitzgerald, of Emory, and Rev. I. H. Hightower, of Kingston, addressed the convention, giving their experience, observation and ideas of bee-culture.

A letter was read from Dr. Wm. R. Howard, of Ft. Worth, the first Secretary of the association, expressing his regrets at not being able to attend the meeting.

A committee was appointed by the President to draft suitable resolutions, in memory of Hon. W. H. Andrews, the first President of the association, who died last August at his home in McKinney. The committee reported the following, which was adopted:

Hon. W. H. Andrews, of McKinney, was the first President of this association, which was organized in Greenville, Texas, July, 1878. He was recognized as a leading authority in bee-culture, and no man stood higher in the profession. He was gentlemanly and courtly toward all with whom he came in contact; a genial companion and true friend. As a lawyer he stood in the front rank of the profession. He departed this life Aug. 6, 1890, at his home in McKinney, Tex., after a painful and lingering illness; therefore

Resolved, That we, the Texas Bee-Keepers' Association, do deplore the untimely fate of our departed friend and brother, cut down in the prime of manhood and usefulness; and

Resolved, That we tender our sincere sympathy to the bereaved family.

Resolved, That these resolutions be spread on our minutes, and a copy sent to the family.

JAS. N. HUNTER,
I. N. HUFAKER,
GEO. A. WILSON,
Committee.

Reports of bee-keepers present showed that the industry was advancing in this State, and that bees have wintered well, and are in good condition at this date. The yield during the past year was satisfactory, the average being about 40 pounds of honey per colony.

The following topics were discussed with animation, and proved very interesting and instructive to all present:

"The best hives." "Queens—rearing and introducing." "Honey—comb and extracted; marketing, etc." "Swarming, dividing and transferring." "Enemies of bees, and how to protect the bees." "How to make bee-culture profitable."

The session extended over two days, with one evening session, and during intermissions President Graham gave the members free access to his large factory.

The election of officers resulted as follows:

President, William R. Graham, Greenville.

Vice-President, George A. Wilson, McKinney.

Secretary, A. H. Jones, Golden.

The session was extremely pleasant and profitable to all present, for which the thanks of the members are due to Bro. Graham and his excellent family.

The next meeting of the association will be held the first Wednesday in April, 1892.

Golden, Texas.

Clubs of 5 New Subscriptions for $4.00, to any addresses. Ten for $7.50.

CONVENTION DIRECTORY.

Time and place of meeting.

1891.
May 6.—Ionia, at Ionia, Mich.
Harm. Smith, Sec., Ionia, Mich.

May 6.—Central Michigan, at Lansing, Mich.
W. A. Barnes, Sec., Lansing, Mich.

May 6.—Bee-Keepers' Ass'n and Fair, at Ionia, Mich.
Open to all. Harmon Smith, Sec., Ionia, Mich.

May 7.—Susquehanna County, at Montrose, Pa.
H. M. Seeley, Sec., Harford, Pa.

May 13.—Western Connecticut, at Watertown, Conn.
Edward S. Andrus, Torrington, Conn.

June 2.—Des Moines County, at Burlington, Iowa.
John Nau, Sec., Middletown, Iowa.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—The Editor.

North American Bee-Keepers' Association

President—P. H. Elwood....Starkville, N. Y.
Secretary—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

President—James Heddon ..Dowagiac, Mich.
Sec'y and Manager—T. G. Newman, Chicago.

Bee and Honey Gossip.

Perfectly Delighted.

I bought 30 colonies of bees last Spring for $87.50, and they increased to 52 colonies, but I got only 250 pounds of surplus honey. The drouth and some mismanagement on my part were the cause. Now I have everything ready for the honey crop, and I have never seen the prospect better for a large yield. I have in use the Globe bee-veil and Bingham smoker, and I am perfectly delighted with them. I would not be without them for twice their cost. The Bee Journal comes promptly every week, and I read it as soon as it is received.

S. B. Bowin.

Lee's Summit, Mo., April 14, 1891.

Langstroth Frames.

My honey crop for last season was 1,000 pounds of comb in one-pound sections from 19 colonies, Spring count, and 7 increase. From those 26 colonies in the Fall I have lost one by starvation, and two others are so weak that I consider them the same as lost. Nearly all will require feeding. Bees have done nothing yet here, the mercury standing from 10° to 14° below freezing for several mornings past. Last year the first pollen was gathered April 12, and the latest date of the first pollen gathered since I have kept bees was April 26. 1. How wide and thick do you advise the top, bottom, and end-bars made for the hanging Langstroth frame? 2. How far apart should the top-bars be spaced?

O. P. Miner.

Taylor Centre, N. Y., April 8, 1891.

[1. In an ordinary Langstroth hive the bottom-bars are ¼x⅝ of an inch; the end-bars are ⅜x⅞ of an inch; the top-bars are ⅞ of an inch and triangular. In the 8-frame dovetailed hive, the deep top-bars are used; they are 1 inch wide, and ⅞ of an inch thick.

2. The distance from center to center is a little less than 1½ inches.—Ed.]

Money Well Spent.

I have received replies from as far west as Oregon and east to Maine, from Ontario on the north, and Texas on the south, and that in less than three weeks after the appearance of the advertisement, which, I think, pretty conclusively demonstrates the value of the American Bee Journal's advertising columns, as well as the wide range of its circulation. Persons wanting anything in the apicultural line, should advertise in its columns.

J. W. Tefft.

Buffalo, N. Y.

Ventilating a Bee-Cellar.

I put 26 colonies into Winter quarters, tiered up three deep in the bee-cellar, covering the roof with sand, to prevent freezing. They were all right as long as the weather continued cold, the mercury ranging from 40° to 43°, but when the ground thawed out in the Spring, and heavy rains kept the soil damp, the cellar became mouldy, and the bees began to dwindle very fast. When I took them out of the cellar, on the 10th inst., I found that 2 colonies had died of starvation, although when putting them in the cellar I left from 15 to 20 pounds of honey in each hive, but the 2 colonies that died I found were very large. I have lost 2 weak colonies by robbing. In order to ventilate my cellar, and prevent the mice from getting into the hive, I proceeded in the following manner: I made a box 4 inches deep, something like a super, then cut an opening 3 inches wide and a foot long on each side, at one edge, leaving the remaining one inch on the other edge. This box I placed on the hive bottom, and nailed it there, with the opening down; tacking wire screen cloth over the opening, on the inside of the box, and down onto the bottom. On this box I placed the hive, and, being the same size, it left the opening above referred to for ventilation. All who have seen the bees say they are doing extremely well. J. M. STRAIGHT.

Necedah, Wis., April 15, 1891.

Pollen from Pumpkin Blossoms.

Last year was a very poor season for honey gathering. In June and July it rained almost continually, and afterwards we had such a drouth that the bees would not gather a pound of honey in a week. Bees have wintered well in this locality. I have not heard of very many being starved to death. Mine wintered well so far, as the Winter has been very mild. I wish some one would tell me whether bees gather much pollen from the blossom of the pumpkin vine. I have watched the bees in the early morning about sunrise, when they would come to their hives all covered with a light yellow substance. Those coming home were yellow, and those going out were black. When I watch my bees laboring in the hot Summer sun, and hear them buzzing, I think their song is:

We're a band of happy workers,
  We hate an idle drone;
We will work while we are little,
  We will work when we are grown.
There's room enough for all of us,
  If we are good and true,
And the world will be the sweeter
  For what we workers do.

JOHN PAULSEN.

New Hall, Iowa, April 10, 1891.

Strong Colonies.

My bees were never stronger at this season, than now. Heavy rains cause us to be hopeful of a good honey harvest the coming season, as the ground is in better condition than for two years previously, at this time. This locality was visited by a heavy hail storm last evening, but no damage to fruit resulted, as the buds were not far enough advanced. HENRY PATTERSON.

Humboldt, Nebr., April 18, 1891.

Heavy Loss by Starvation.

I took my bees out of the cellar the 12th inst., and out of 17 colonies I have 10 left, in good condition. The colonies that died were new, and scarcity of stores was the cause. I hope the coming season will be better than last. It is raining to-day, and the prospect is good for fruits and clover. L. HYATT.

Rochester, Minn., April 14, 1891.

Damaged by Hail.

We were visited by a severe hail storm yesterday, which stripped nearly all the buds from the peach trees, and a great many of the buds from the apple and cherry trees. As the peach trees were just beginning to bloom, they suffered the most. The hail stones knocked the bark from the tender trees, and broke thousands of panes of glass. Clover looks well now, but the weather has been very cool this Spring. Bees are breeding slowly, and my loss from dwindling will be quite heavy. One colony now has the ague. N. M. HOLLISTER.

Springfield, Mo., April 10, 1891.

Bees are Booming.

Bees are booming in this locality. I received the Globe bee-veil in good order. Am well pleased with it, and think it the boss veil. JOHN Q. HILL.

Prophetstown, Ills., April 17, 1891.

Could Not Give Up the Bees.

Last Tuesday being clear and warm, I thought it was time to take my bees from the cellar, so my son and I took the two-horse wagon to the farm, that we left last month, for my bees (having sold the farm, but I could not give up my bees, if we did live in town). We put on the side-boards, and nearly filled the box with hay, and then put the hives on that, crosswise of the box. I first tacked some screen-wire over the entrance to the hives, and over openings in the honey-board, which I use in preference to canvas, then put on the cap, and nailed cleats on both sides of the hive, to both hive and cap, to keep the cap in place. We put in 6 hives, packed them in solid with other things that we had to move, and started on our 10-mile drive, over the roughest roads that I ever traveled. It required 4½ hours to drive that distance, going slow so as to jar the bees as little as possible. I have taken the AMERICAN BEE JOURNAL for 2 years, and am satisfied that I cannot do without it as long as I keep bees. It is a great pleasure to read the letters from Mrs. Harrison, and other lady bee-keepers. MRS. G. W. MORRISON.

North English, Iowa, April 10, 1891.

Mildew and Dampness.

Last Fall I put my bees in a cave, and they wintered very well, I think, but on looking into the hives I find some of them have mold, or mildew, in the lower part, and on some of the frames it extends to the top. Now, I would like to know if it will injure the bees? What can I do to get rid of it? Also, what caused it, and what can I do to prevent it in the future? Please answer these queries at your earliest convenience. FRANK WHEELOCK.

Stevens Point, Wis.

[The mildew was caused by dampness, but it is not detrimental to the bees. Let it alone, the bees will "clean house" in due time, and will do it better, cheaper, and more thoroughly than you can.—ED.]

Better than was Expected.

On Dec. 1, my bees were put in the cellar in Pickering, where they remained until March 10, when I selected 7 of the best colonies and sold the remainder. These 7 colonies I nailed up and loaded on the cars, on the latter date, and they arrived here on March 12, and were again put in the cellar. To-day I took them out, and found that one colony had starved to death, and one had lost their queen, but was strong in bees. The remaining 5 colonies are in as good condition as I ever had bees at this date, although I did not expect to have one colony alive after such treatment. The weather was such that they have not taken a flight from the time they were first put in the cellar until to-day. J. BAXTER.

St. Paul's Station, Ont., April 6, 1891.

Losing Their Bees.

My bees have wintered well, considering the condition they were in when placed in the cellar, on Dec. 5. I took them out on April 11, and found 9 colonies dead out of 173. A number of colonies are weak, and will doubtless die before May 1. My bees began flying the day they were taken from the cellar, and before night were bringing in pollen. Clover looks well, in this part of the county, and we had a nice rain on April 12, which will start it to growing. Bee-keepers in this county did not get much surplus honey the past season, and those distant from timber got scarcely any honey at all. My crop was 4,000 pounds—about one-half comb-honey, in one-pound sections, and the remainder extracted. Farmers in this locality who keep from 5 to 20 colonies of bees, and who say they have no time to "monkey" with a bee-periodical, bees, or what others write, etc., are losing their bees.

Oswalt, Iowa. WM. PEARSON.

Honey-Comb Bee-Feeder.

Last Winter I kept my bees in a shed, and on examining them Feb. 1, I found they were dying in great numbers, and concluded that dampness was the cause. It being a warm, sunny day, I aired them well, nailed some boards on a fence, placed the hives on a platform on the south side of the fence, covered them with boards, and, so far, have lost but one colony. They are destitute of stores, and I am feeding them with sugar syrup, placed in the top of the hive, using some old comb as a feeder, and think it is as good a feeder as I can get. Will some of the readers of the BEE JOURNAL please inform me how to transfer my bees from box-hives to dovetailed hives? A. J. BUSS.

Belmont, Wis., April 9, 1891.

[You will find, on page 472, an article detailing the method of transferring practiced by Mr. James Heddon; also, on page 545, an article by Mr. Highbarger. These will, no doubt, furnish the desired information.—ED.]

Very Well Pleased. — The Sewing Machine and Scales are received in good order, and I am well pleased with them. They do good work. The sewing machine is ornamental as well as useful. The scales are very handy for family use.—G. RUFF, Burlington, Iowa.

We Club the American Bee Journal and the Illustrated Home Journal, one year for $1.35. Both of these and Gleanings in Bee Culture, for one year, for $2.15.

Wavelets of News.

Cloth Instead of Tin for Hive Covers.

Some styles of bee hives are so large that the covers must be made of more than one piece. To prevent leakage, they have been covered with tin. This is expensive, and some bee-keepers have been trying heavy cotton cloth instead of tin. The cover is first painted, then the cloth laid on, and another coat of paint put on over the cloth.—*Review.*

Plants, Trees, and Honey.

The old Scotchman said to his son, "Plant a tree, Jack, for it will be growing while you are slaping." This is good advice for all to follow who own an acre of land. I know that tree planting has been discouraging of late years, but try again. Our Early Richmond cherries bore about fifteen years after planting, and the bees fertilized and enjoyed the bloom, and we the fruit, and the delight of seeing them bud and blossom, and hanging with beautiful fruit. A German passing by, stopped his horse, and raising his hands, said, "O, mine Got, how purty!" Cherry trees are valuable for bees, as they bloom early, before the apple, and stimulate bees to brood-rearing for the clover harvest.

For the past two seasons our bees have enjoyed the luxury of peach honey, and we the fruit. Our trees are seedlings, and cost nothing but the planting. A friend inquired, "How did you come to have peach trees?" I replied, "We trusted in God and planted the stones." O, the luxury of shaking down the luscious peaches ripened upon the trees. Plant peach trees and place in their shade a colony of bees to gather the honey, fertilize the bloom, and protect the fruit, when ripe, from thieves. Peach buds are all right so far in this locality.

We can do without all other fruit better than the apple, and when the tree is good for nothing else, it will be excellent fuel to burn in the smoker to tame the bees. Eternal vigilance is the price of a good apple, and we must study its habits, friends and enemies. The honey bee must produce fine fertilizations in order that an apple may grow to perfection. The bee is the apple's best friend, and should not be destroyed along with its enemies by spraying with poison while in bloom. The spraying is lost, too, for the enemy has not arrived. Wait until the bloom has fallen, then spray your trees, and you will kill your enemies, and not your friends.

If there was any plant that I would recommend for honey alone, it would be the raspberry; it continues in bloom for three weeks, and a peculiarity about it is, that bees will be working upon it immediately after a hard shower. The heads hang down, and the rain does not wash the honey out, and it apparently secretes honey while it is raining. All of the small fruits produce honey more or less, and need the assitance of the bees to insure a crop.—Mrs. L. Harrison, in the *Prairie Farmer.*

Bees, Not Honey, in the Spring.

It is bees, instead of honey, that we need in the hives in the fore part of the season. Too many stores in May and June will just as surely spoil a colony for section honey, as it will to keep the bees so short of stores that they keep their brood in check all the Spring. There is no such thing as having the combs full of honey during the forepart of the season, and then having the sections filled with clover honey.—G. M. Doolittle, in *American Bee-Keeper.*

Educate the Children Correctly.

In the Third Reader of the Indiana Educational Series, on page 134, are some statements that should be corrected. It says, "We commonly speak of bees as gathering honey. This is not exactly correct. They make honey out of what they gather from the flowers."

Now, I believe it is generally admitted that bees do gather honey from the blossoms, and that they cannot be said to make honey, any more than a man can be said to make corn, when he goes into the field to gather it for the crib. Further on it says: "But the bee cannot always find such nice food, and then he flies off to the fields, or perhaps helps himself to the drainings of some molasses, or to the dregs of some sugar cask. Honey made from these things does well enough for the bees' Winter store, but it does not suit our taste."

It does not suit our taste, because it is simply molasses, or sugar syrup, and all the bees have done was to carry it to their empty combs. As for its doing well enough for the bees' Winter stores, that might be true if it was a good grade of sugar, but if molasses or a cheap grade of sugar, it would be very unsafe Winter food. I believe it is very desirable that some safe reliable information upon the rudiments of apiculture should be given in the readers in our schools.—A. C. Bugbee, in the *Indiana Farmer*.

[While revising the above-mentioned text-book, it would be well, also, to give to the honey-bee the correct gender, as the worker-bees are not males. The only males in the colony are the drones, which do not gather honey, nor do any work whatever.—Ed.]

The Apiculturist.

The April number of this periodical is adorned with an artistic cover and inside title. It is, as usual, filled with valuable reading matter. Here are a few of its items on queen-bees:

Imported queens are very dark, and their progeny resemble American hybrid Italians.

So far as our experience goes in importing queens, we are free to say that our foreign friends do not thoroughly understand the art of rearing them.

The best queen-bees produced are reared by American bee-keepers. They excel in points of color, size and purity, as well as in honey-gathering qualities. Is this saying too much for us?

A queen-bee is very tenacious of life. We have sometimes injured the head, or other parts of their bodies, and have seen the queen turn over, apparently dead, but in a few moments they would revive and come up as lively as ever.

Then, again, a good queen rarely, if ever, skips a cell; the inferior queen will "jump" a good many. It seems to us that even the novice can judge of the quality of a queen, if these simple rules are observed.

When a queen commences to lay, she deposits a few eggs on one side of the comb, and then goes to the other side and lays in those cells exactly opposite. This she continues to do till the entire comb is filled.

A good queen, when in the act of depositing her eggs, always has her head pointing towards the bottom of the hive, while an inferior one, when she lays, is seldom found in that position. This accounts for the fact that while the eggs of the former are all laid in one position (perpendicular), those of the latter are deposited in all ways.

Do not crowd down the prices of queens. They are low enough. If there is to be any crowding done, let it be for quality, and a higher price naturally follows. There is nothing so cheap about an apiary as a cheap queen.

Glue for Adhering to Tin.

This is a recipe for making glue that will make honey-labels adhere to tin. Oliver Foster obtained the recipe of D. E. Brubaker, and sent it to *Gleanings*, giving his method of using it as follows:

Stir two ounces of pulverized borax into one quart of boiling water. When dissolved, add four ounces of gum shellac. Stir while it boils, until all is dissolved. Apply with a brush in the usual way.

I prefer using a little less water, especially if the labels are small and stiff; then if it becomes too thick to apply readily, warm it a little, or add a little hot water. After applying the label, I press a damp cloth over it to press out and wipe off any surplus glue that may come to the edge.

General Sherman Loved Honey.

Among other incidents recounted by Col. Belknap, was one that occurred in 1864, when Gen. Sherman was near Chattanooga. One day the General expressed a desire to have some honey. There were some hives upon debatable ground between the two armies. They had escaped the hands of the foragers for some time. Turning to Belknap one day, Uncle Billy said:

"If you can find one convenient, Captain, I wish you would bring in a good bee gum."

That was enough for the Michigan captain. In a jiffy he mounted his horse and was off. With a little squad of troopers he made a raid upon the "gums." After selecting the most likely in appearance, he turned it over and clapped the half of a peep tent over the open end of it. A peep tent is what is termed a shelter tent in the Army of the Potomac. After the "gum" was secured, it was lifted up in front of Belknap, who was still astride his horse. He held it in place with his left arm, and gave a free rein to his steed.

Away he went at full gallop, headed for Sherman's tent. The squad troopers was at the heels of his horse. It was soon apparent that the Captain was in trouble. The peep tent did not remain in place. The motion of the horse loosened the cloth. It could not be held over the mouth of the gum. The bees popped out and began to hum in the ears of both charger and rider. They struck the Captain in the face, stung him in the back of the neck, and pricked his hands, arms, and legs with their tiny bayonets. They warmed the horse until he became almost frantic. He shot ahead like an arrow. His nose lay on a line with his ears, and in his fury he switched the air with his tail.

The Captain, however, clung to the gum. Nor did he lose his presence of mind. He steered the wild horse straight for headquarters, amid the derisive yells of the soldiers along the way. As he passed the open flap of Sherman's tent, he threw the gum beneath a little table, shouting: "There's your d—d honey."

The Captain whirled away like the wind, leaving the General to fight it out with the bees left in the gum. Uncle Billy for once was surprised. Before he fairly comprehended the situation a bee jabbed him under the eye. Then he got it on the flange of the ear. It was too much. He opened up his brimstone battery in a way that delighted the guard at headquarters. More positive language was never heard. But he held the fort—held it until he felt the bees crawling up the legs of his trousers. Then he dashed from the tent, and was not again seen about headquarters for several hours.—*Boston Herald.*

Beautiful Queen-Bees.

There has been confusion over the word "beauty." A bee may be beautiful and not be highly colored. Color is not necessarily beauty. There are two classes of Italian bees; the beautiful and the bright. The bright Italians are not beautiful; they are shining, brassy, flashy yellow; while the beautiful Italians have the assemblage of graces that please the eye.—E. L. PRATT, in the *Apiculturist.*

Workers for the Harvest.

Each bee-keeper ought thoroughly to understand the honey resources of his own locality. He should know when to *expect* a honey flow. When the time comes, the expected harvest may not come, but the bee-keeper should be in readiness for it. It is possible to have a good honey flow, and yet secure no surplus, because there are not a sufficient number of bees to gather it. Bees are valuable when there is honey to gather; at other times they are consumers. Less populous colonies can be more successfully wintered in the cellar than out-of-doors; while by proper protection and care in the Spring, such colonies can be brought up to the requisite strength in time for the honey harvest. If by such management we are enabled to so reduce our colonies in strength during the non-producing time of the year that stores are saved to the amount of from three to five pounds per colony, we are well paid for our trouble.—W. Z. HUTCHINSON, in the *Country Gentleman.*

Convention Notices.

☞ The bee-keepers of Western Connecticut who are interested in forming a Bee-Keepers' Association, are requested to meet at Mr. Edwin E. Smith's, in Watertown, Conn., May 13, as early in the day as possible. A good time is expected.

EDWIN E. SMITH.
EDWARD S. ANDRUS.

☞ The Ionia Bee-Keepers' Convention, will meet at Ionia (Mich.) May 6, 1891. It is intended by the management to have a Fair in connection with it. W. Z. Hutchinson, of Flint, Mich., editor of the "Bee-Keepers' Review," will deliver an address. He is one of the leading bee-masters of the United States. You cannot afford to miss his address. Come, and bring your wife with you. Get your neighbors to come. Will you please bring with you samples of hive and frame, super and sections, and samples of honey and mode of putting up, etc., and let us have an exhibition of our own.

HARM. SMITH, Sec., Ionia, Mich.

☞ The 8th semi-annual meeting of the Susquehanna County Bee-Keepers' Association will be held at Montrose, Pa., on Thursday, May 7, 1891.

H. M. SEELEY, Sec., Harford, Pa.

☞ The Central Michigan Bee-Keepers' Convention will be held at Pioneer Room, at the Capitol, Lansing, Mich., on Wednesday, May 6. A cordial invitation is extended to all.

W. A. BARNES, Sec, Lansing, Mich.

☞ The Des Moines County (Iowa) Bee-Keepers' Association, will meet at the Court House in Burlington, Iowa, on Tuesday, June 2, 1891, at 10 a.m. It is intended to organize a Southeastern Iowa Association. All interested in bees and honey are cordially invited to attend.

JOHN NAU, Sec., Middletown, Iowa.
GEO. BISCHOFF, Pres., Burlington, Iowa.

☞ I am well pleased with the Sewing Machine you sent me; any person wanting a good Sewing Machine, one that is equal to the high-priced machines which are sold by agents, can do no better than to send for your $15.00 Machine. They will be agreeably surprised when they see it. Mine is really better than I expected.

W. J. PATTERSON,
Sullivan, Ills., Dec. 5, 1890.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

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ALFRED H. NEWMAN,
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☞ Subscribers who do not receive their papers promptly, should notify us at once.

☞ Send us *one new* subscription, with $1.00, and we will present you with a nice Pocket Dictionary.

☞ The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to pay for another year.

☞ Systematic work in the Apiary will pay. Use the Apiary Register. It costs:

For 50 colonies (120 pages) $1 00
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☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

The Convention Hand-Book is very convenient at Bee-Conventions. It contains a simple Manual of Parliamentary Law and Rules of Order for Local Bee-Conventions; Constitution and By-Laws for a Local Society; Programme for a Convention, with Subjects for Discussion. In addition to this, there are about 50 blank pages, to make notes upon, or to write out questions, as they may come to mind. They are nicely bound in cloth, and are of the right size for the pocket. We will present a copy for one new subscription to the BEE JOURNAL (with $1.00 to pay for the same), or 2 subscribers to the HOME JOURNAL may be sent instead of one for the BEE JOURNAL.

◆

The "Farm Poultry" is a 20-page monthly, published in Boston, at 50 cents per year. It is issued with a colored cover and is finely illustrated throughout.

We have arranged to club the AMERICAN BEE JOURNAL with the *Farm-Poultry* at $1.35 per year for the two. Or with the ILLUSTRATED HOME JOURNAL at $1.75.

◆

If you have a desire to know how to have Queens fertilized in upper stories, while the old Queen is still laying below—how you may *safely introduce* any Queen, at any time of the year when bees can fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact, everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and is as interesting as a story. Price, $1.00. For sale at this office.

◆

When talking about Bees to your friend or neighbor, you will oblige us by commending the BEE JOURNAL to him, and taking his subscription to send with your renewal. For this work we will present you with a copy of the Convention Hand-Book, by mail, postpaid. It sells at 50 cents.

◆

Calvert's No. 1 Phenol, mentioned in Cheshire's Pamphlet on pages 16 and 17, as a cure for foul-brood, can be procured at this office at 25 cents per ounce, by express.

CLUBBING LIST.

We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

	Price of both.	*Club.*
The American Bee Journal	$1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Guide	1 50	1 40
Bee-Keepers' Review	2 00	1 75
The Apiculturist	1 75	1 65
Canadian Bee Journal	1 75	1 65
American Bee-Keeper	1 50	1 40
The 7 above-named papers	6 00	5 00
and Langstroth Revised (Dadant)	3 00	2 75
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Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
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Prairie Farmer	2 00	1 65
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American Garden	2 50	2 00
Rural New Yorker	2 50	2 00
Nebraska Bee-Keeper	1 50	1 35

Do not send to us for sample copies of any other papers. Send for such to the publishers of the papers you want.

☞ **Jacob T. Timpe**, of Grand Ledge, Mich., offers to give away 50 Tested Queens, of his five-banded Italians, to purchasers of his New Potatoes, which have been advertised in the BEE JOURNAL. Do not fail to read his advertisement on page 556. He refers you to his postmaster, as to his responsibility.

◆

Appreciated When Seen.

I put my "Globe" bee-veil on exhibition at our convention at Greenville, Texas, on April 1 and 2, and it was the cause of considerable admiration.

Greenville, Tex. W. R. GRAHAM.

◆

The Convention Hand-Book is received, and I am well pleased with it. Every bee-keeper should have a copy.

CHARLES WHITE.

Farmers' Valley, Nebr., Mar. 3, 1891

HONEY AND BEESWAX MARKET.

DETROIT, April 21.—Comb-honey is quoted at 15@16c; demand light. Extracted, 7@8c. Beeswax firm, at 28@29c.

M. H. HUNT, Bell Branch, Mich.

NEW YORK, April 21.—Market is bare of comb-honey. We quote: Extracted, buckwheat, 7@7½c; California, in good demand, at 6¾@7¼c, and market well supplied; Southern, none in market. Beeswax, 25@27c.

HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

KANSAS CITY, April 21.—Market continues about the same; stocks becoming light; no receipts. We quote: White 1-lb. comb, at 16@18c; dark, 12@13c; California white, 2-lb., 14@15c; extracted, 6@7c. No Beeswax in the market.

CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CINCINNATI, April 21.—Demand good for extracted-honey, at 6@8c. Market is almost bare of comb-honey, for which there is a good demand at 14@16c for choice, in a jobbing way. Beeswax is in good demand at 25@30c., for good to choice yellow.

C. F. MUTH & SON,
Corner Freeman & Central Aves.

CHICAGO, April 21.—Demand for both comb and extracted honey increasing, and our stock is light. Can use shipments to advantage. 1-lb. sections, 16@18c; 2-lbs., 14@15c; extracted, 7@8c. Beeswax, 30c.

S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, April 21.—Fancy white 1-lb. comb, 18c; fair to good, 17c; dark 1-lb., 14@15c; 2-lb. white comb, 15@16c; 2-lb. dark, 13@14c; extracted, white, 7c; dark, 5@6c.

HAMBLIN & BEARSS, 514 Walnut St.

CHICAGO, April 21.—There is the usual Spring demand for honey, and best white continues to bring 17@18c; honey that is off in color and condition sells for 2@3c less; very little call for dark comb. Extracted, is selling at 7@8c, in cans or barrels. Beeswax, 27@28c.

R. A. BURNETT, 161 S. Water St.

BOSTON, April 21.—Honey is in fair demand; supply short. White 1-lb. comb is very scarce and wanted, at 18@20c: fair to good, 18@19c; 2-lb. sections, 16@17c. Extracted, 8@9c. Beeswax, 30c.

BLAKE & RIPLEY, 57 Chatham Street.

ALBANY, N. Y., April 21.—Honey market is slow, with small stocks of comb. We quote: White comb at 15@16c; mixed, 13@14c; dark, 12@13c. Extracted, light, slow at 7@8c; dark, firm at 6@7c. Beeswax, 26@30c.

H. R. WRIGHT, 326-328 Broadway.

Remember the *sad* experience of last season! Everyone should order all the Supplies necessary for the Apiary *at once*, and avoid "the rush." The delays and annoyances of last year should teach a valuable lesson in this line.

◆

A Nice Pocket Dictionary will be given as a premium for only **one new** subscriber to this JOURNAL, with $1.00. It is a splendid little Dictionary—just right for the pocket. Price, **25 cents.**

Catalogues and Price-Lists for 1891 have been received from

W. H. Norton, Skowhegan, Me.—32 pages—Bees and Apiarian Supplies.

Leininger Bros., Fort Jennings, O.—12 pages.

Geo. W. Cook, Spring Hill, Kans.—8 pages—Bees and Apiarian Supplies.

E. Calvert, Des Moines, Iowa.—8 pages—Bee-Keepers' Supplies.

◆

Well Satisfied.

I would not do without the American Bee Journal for anything. It is the best and cheapest publication on bees and honey that I know.

Thomas Foreacre.
Marshallton, Del.

◆

Supply Dealers desiring to sell our book, "Bees and Honey," should write for terms.

◆

☞ The Union or Family Scale has been received, and I am much pleased with it.

W. H. Kimball.
Davenport, Iowa.

We send both the Home Journal and Bee Journal for one year, for $1.35.

Binders made especially for the Bee Journal for 1891 are now ready for delivery, at 50 cents each, including postage. Be sure to use a Binder to keep your numbers of 1890 for reference. Binders for 1890 only cost 60 cents, and it will pay you to use them, if you do not get the volumes otherwise bound.

◆

Supply Dealers should write to us for wholesale terms and cut for Hastings' Perfection Feeders.

◆

Red Labels are quite attractive for Pails which hold from 1 to 10 lbs. of honey. Price, $1.00 per hundred, with name and address printed. Sample free.

Wants or Exchanges.

Under this heading, Notices of 5 lines, or less, will be inserted at **10 cents per line,** for each insertion. when specially ordered into this Department. If over 5 lines, the additional lines will cost 20 cents each.

WILL EXCHANGE several colonies of bees for either Wood-Workman's Tools or a second-hand Bicycle. For further particulars, address F. B. ELLIOTT,
17D2t La Salle, Ills.

WANTED—To place in the hands of every wide-awake bee-keeper, my Catalogue. Write me AT ONCE for one and see how cheap I can sell you Hives, Sections and other Supplies.
17A2t HENRY STEWART, Prophetstown, Ill.

WANTED—To exchange 1-lb. thin Vandervort f'd'n for 2 of wax. Samples and testimonials free. C. W. DAYTON, Clinton, Wis.
8A10t

HELP WANTED IN APIARY—Single man; must have experience extracting honey; not afraid of bees. Must be able to get along lively when necessary, not dissipated, and must work cheap. State experience and wages wanted.
E. DRANE & SON,
16A2t Eminence, Ky.

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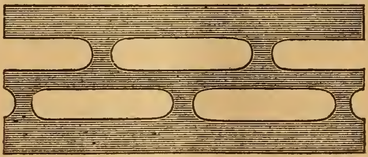

We can now furnish strips of Perforated Zinc with **2** rows of holes, ¾x19, manufactured by Dr. G. L. Tinker, at the following prices:

100 to 500,	per hundred	$1.60
500 to 1,000,	"	1.55
1,000 to 2,000,	"	1.50

All orders promptly filled.

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Send 50 Cents For my Book, entitled—"A Year Among the Bees," 114 pages, cloth bound. Address
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ITALIAN AND ALBINO QUEENS at the lowest prices.
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SUPPLIES BY ELECTRICITY ! Observatory Hives, 40; Bee-Feeders, 10; List free. **E. CALVERT,** Des Moines, Iowa.
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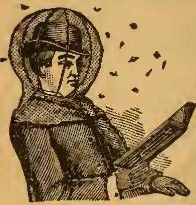
The "Globe" Bee Veil

Price, by Mail or Express, $1.00.



There are five cross-bars united by a rivet through their center at the top. These bars are buttoned to studs on the neck-band. The bars are of best light spring steel. The neck-band is of best hard spring brass. The cover is of white bobinet with black face-piece to see through.

It is very easily put together; no trouble to put on or take off; and folds compactly in a paper box 6x7 inches, by one inch deep. The protection against bees is perfect—the weight of the entire Veil being only five ounces.

Extra Nets, 25 cents each.

CLUBBING OFFER.

We will send this Veil and the Bee Journal one year for **$1.75.** Or, we will give the Veil **Free** for three (3) **New** Subscribers to the Bee Journal, with $3.00 to pay for them.

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Bee-Hives, Sections, &c.

On and after Feb. 1, 1890, we will sell our No. 1 V-groove Sections in lots of 500 as follows: Less than 2,000 at $3.50 per thousand; 2,000 to 5,000 at $3.00 per thousand. Write for special prices on larger quantities. No. 2 Sections $2.00 per thousand. Send for Price-List for other Supplies. Address,

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If you don't send in your order at once for some of my New Potatoes. See my ads. on pages 404 and 524, of the BEE JOURNAL.

50 Tested Queens to be Given Away!

Do you want one? If so, turn to the pages referred to, and **Send in your Order before May 1.** After that none will be given away. Letters postmarked May 1, will yet compete. **After that Date,** all not taken **will be withdrawn.** These Queens are worth $2.00 each, and all are bred from my **best stock of the Five-Banded Italians! Lose no time, but send in your order to-day.** JACOB T. TIMPE, Drawer 90, Grand Ledge, Mich.
17A2t

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Nice White, V-groove one-piece **Sections,** only $3 per thousand. Tested Italian Queens, in May, $1.50. Three-frame Nuclei, with tested Queen, $3.50. Bee-Hives and other Supplies very low. Price-List free.
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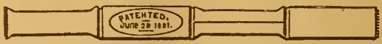
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WILL furnish you, the coming season, ONE PIECE SECTIONS, sand-papered on both sides—as cheap as the cheapest, and better than the best.
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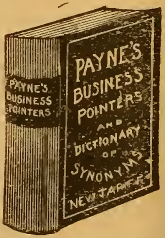
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THE AMERICAN BEE JOURNAL
CIRCULATES
ALL OVER THE WORLD
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVII. April 30, 1891. No. 18.

Editorial Buzzings.

When writing an article for the press,
Whether prose or verse, just try
To settle your thoughts in the fewest words,
And let them be crisp and dry.
And when it is finished, and you suppose,
It is done exactly brown,
Just look it over again and then
Boil it down.

* * *

Mr. Morris A. Williams, of Berkshire, Tioga county, N. Y., died April 18, aged 40 years. Mr. Williams has been engaged in bee-keeping for a number of years, and was a regular subscriber to the Bee Journal. His malady was consumption, and last Fall he took a trip to the West, hoping thereby to improve his health by a change of climate, but the grim reaper, Death, had already marked him for his own. Mr. Williams was a highly-respected citizen, and was the senior member of the firm of M. A. Williams & Co., whose railroad apiary was illustrated on page 757 of the Bee Journal for 1882.

It is Encouraging to know that our labors are appreciated. It helps us all to renewed and diligent exertions when we know that those for whose benefit we labor, recognize and esteem our efforts. The following from Dr. C. C. Miller will encourage our friend, Hon. J. M. Hambaugh, and so we publish it:

> Representative Hambaugh is one of the sort worth having in a Legislature. The work he is doing will not only benefit Illinois bee-keepers, but will help to stir up the matter in other States. If the fraternity only ask for what they need, there seems to be no difficulty in getting it, but it helps greatly to have a man like Hambaugh at headquarters.
>
> C. C. Miller.
>
> Marengo, Ills., April 17, 1891.

It must not be forgotten, however, that we have several others in the halls of the Senate and House of Representatives, who are working for our interests, and are entitled to our highest esteem and approbation. They are co-laborers with him, for the interests of apiarists.

* * *

But Little has been heard in the bee-papers of late from our friend J. M. Hicks, who has for years figured conspicuously in the bee-keeping world, but we received a letter from him last week. He is getting along in years, and necessarily, with age comes infirmity, in a greater or less degree in us all. He said:

> I write you for a two-fold purpose; first, to let you know that I yet live, and regularly receive the American Bee Journal, which contains much that interests the *oldest* bee-keepers as well as others; and, secondly, to tell you about the death of our venerable friend, Dr. Stephen Hathaway.

* * *

A Queen-Cage is received from Jenkins & Parker, of Wetumpka, Ala., 1½x2½x¾ of an inch. It weighs but half an ounce, and transportation in the mails costs but one cent. Printed on the cover are the following directions:

> After taking off this board, see that the queen is all right. Place the cage between the top-bars of two brood-frames, directly over the cluster, with

the wire-cloth down, drawing frames firmly against it. With a hive having room enough the cage may be laid on top the frames. The bees in the hive will eat the candy out through the hole in the wire-cloth in about 24 hours, thus releasing the queen. Do not open the hive for two days, after placing cage; and then if the queen is still in the cage, close up for two days longer. The idea is to let the bees release the queen themselves, when the hive is closed and quiet. *First be sure the colony is queenless.*

Of course, the cage has a compartment for the food, accessible only through a small aperture. The wire-cloth has a round hole made ingenously through the center of one side, for use as above described. It is illustrated on page 586.

Dr. Stephen Hathaway, of Muncie, Ind., departed this life on Monday, April 20, at 3:30 a.m. Mr. Hathaway was one of Indiana's prominent bee-keepers. He was a kind and loving husband and father, and leaves a wife and several children, all of the latter having grown to man and womanhood. In all of his business transactions Mr. Hathaway was honest and honorable, and his whole aim in life seemed to be to do good in all things. The widow and family have our sympathy in their sad bereavement.

A Slight Error.—On page 578, in an article on foul-brood, Mr. C. J. Robinson says that Prof. Cook "has not broached the subject of the origin of the disease." Now, we feel constrained to inform Mr. Robinson that he is in error in this matter, and that by reference to page 351 of the BEE JOURNAL for 1890, he will find that Prof. Cook not only states that the disease is the result of bacillus alvei, but also describes them. We mention this, believing it to have been an oversight on his part.

The Price-List of J. J. Snyder, North Lima, Ohio, is received.

Foul-Brood Microbes. — In addition to the testimonies already given on pages 470 and 513, from manufacturers of comb-foundation, as to the killing of spores and microbes when making beeswax into comb-foundation, Mr. D. A. Jones, of Beeton, Ont., presents the following in the *Canadian Bee Journal:*

> Science and practice do not always accord, and I am willing to believe that they do not in the present instance. I am not prepared to say that the heat ordinarily required for the boiling of honey or wax will *kill* the foul-brood germs or spores, which may be in them, but I do say that in all my experience (and I have had a good deal) I have *never had a case of its return, after submitting them to this heat.*
>
> I have often taken foul-brood honey and put it into a dish, suspending the dish in boiling water, but not allowing any water to get mixed with it. In this way I have rendered unfertile all germs of disease which were in it—at least there were none ever appeared afterward. I have also made similar tests with wax, with the same results.
>
> Wax melted in the sun, or at a lower temperature than the boiling point of water (212°) may, perhaps, not be free from the fertile spores. I should not care to risk it. My beliefs in this direction have suffered no change since I put myself on record at the Michigan convention some years ago, as stated by Mr. Corniel.

Ventilation.—Respecting this Mr. G. M. Doolittle remarks as follow in *Rural Home:*

> All hives having bees in them should be provided with ample ventilation during the Winter months, but it is not absolutely necessary to give upward ventilation if the hives are well ventilated at the bottom. Some ventilation is necessary in any climate to prevent dampness from accumulating in the hives and injuring the outside combs with moldiness. What is often called "upward ventilation," is really no ventilation at the top, in the meaning of some other people. If the frames and the cluster of bees, at the top of the hive, is covered with a number of bee-quilts, or with one quilt and a sawdust cushion, forest leaves or chaff, they are said by some to have upward ventilation, and the latter would be the nearest right.

The National Bee-Keepers' Union.

HOW TO BECOME MEMBERS.

Several have sent inquiries to know how to become members of the Union. In order to answer all at once, and save writing a letter to each, we invite attention to the following:

The Entrance Fee is $1, and that pays for the Dues of any portion of the unexpired current year, ending Dec. 31.

Then it costs only one dollar for Annual Dues, which are payable every New Year's day, and must be paid within six months, in order to retain membership in the Union.

If membership ceases, all claims against former members also cease; and all claims to the protection of the Union are dissolved.

The Constitution of the Union reads as follows:

Article I.—This organization shall be known as the "National Bee-Keepers' Union," and shall meet annually, or as often as necessity may require.

Article II.—Its object shall be to protect the interests of bee-keepers, and to defend their rights.

Article III.—The officers of this Union shall consist of a President, five Vice-Presidents, and a General Manager (who shall also be the Secretary and Treasurer), whose duties shall be those usually performed by such officers. They shall be elected by ballot, and hold their several offices for one year, or until their successors are elected; blank ballots for this purpose to be mailed to every member by the General Manager.

Article IV.—The officers shall constitute an Advisory Board, which shall determine what action shall be taken by this Union, upon the application of bee-keepers for defense; and cause such extra assessments to be made upon the members as may become necessary to their defense; *provided* that only one assessment shall be made in any one fiscal year, without a majority vote of all the members (upon blanks furnished for that purpose), together with a statement showing why another assessment is desirable.

Article V.—Any person may become a member by paying to the General Manager an Entrance Fee of ONE DOLLAR, for which he shall receive a printed receipt making him a member of the Union, entitled to all its rights and benefits. The Annual Fee of $1.00 shall be due on the first day of January in each year, and MUST be paid within six months in order to retain membership in this Union.

Article VI.—The Funds of this Union shall be used for no other purpose than to defend and protect its members in their rights, after such cases are approved by the Advisory Board; and to pay the legitimate expenses of this Union, such as printing, postage, clerk-hire, etc.

Article VII.—This Constitution may be amended by a majority vote of all the members at any time.

The Entrance Fee and Dues must be sent direct to the General Manager, Thomas G. Newman, Chicago, Ills., who will record the names, and send receipts for every dollar sent in.

We call particular attention to the remarks of Mr. E. France, on page 571, concerning the Union. Let every bee-keeper read it, and consider whether it is not his duty to become a member of the Union. On one thing Mr. France is in error. The officers of the Union have been made the members of the Defense Committee of the North American Bee-Keepers' Association, and in that way the two organizations are "united" and act in *harmony*, but yet they have independent management and different Constitutions and By-Laws. This is the only kind of "union" which we think could be considered, and which would be mutually advantageous and agreeable.

Permanent Exhibit.—Northern manufacturers and dealers in machinery and manufactured articles are invited to join with the South and show the latest labor-saving devices of every description, at a permanent exhibition, to be inaugurated by the fourteen Southern States, New Mexico and Arizona.

The exhibition is to be opened in Raleigh, N. C., May 15, 1891, and is under the direction of the several State governments, for the purpose of displaying their products and resources. From Oct. 1 to Dec. 1, a great Southern Exhibition will be held at the same place.

Hon. John T. Patrick is Secretary, with headquarters at Raleigh, N. C., and anyone desiring information should address him.

Queries and Replies.

Liquefying Candied Honey.

Query 764.—1. I wish to build a honey-tank holding one or two barrels, and arrange the same so that the honey in it may easily be liquefied when granulated. In what shape and of what material should I construct it? Would galvanized-iron be a good material? 2. Not having steam at my command, I must resort to either kerosene or wood fire; but how can I best apply it?—F. G.

I can not advise.—M. Mahin.

Try James Heddon's plan.—C. C. Miller.

Why make your tank so large? Why not use the 60-pound can?—Eugene Secor.

I am not posted, having had no experience. I only run a small apiary for experimental purposes.—J. E. Pond.

For storing honey, I use honey cans holding about 300 pounds each. I believe tin is considered better than galvanized-iron for holding honey.—G. M. Doolittle.

If you need to use so large a place to liquefy honey, you are smart enough to get along without asking this question. I should prefer a good quality of tin.—A. B. Mason.

1. Do not use galvanized-iron, as *some* of it corrodes badly. 2. See my article in a late number of the *Review*, describing the best plan I know of to liquefy candied honey.—James Heddon.

1. I would not want such a tank as you describe. I prefer tin cans holding 60 pounds. 2. Two such cans may be placed in a common wash boiler, partly filled with water.—H. D. Cutting.

1. Have had no experience in that line. Galvanized-iron is not a proper material to place in contact with honey. 2. Why not make a sun evaporator like some of our California friends.—C. H. Dibbern.

1. Such a tank should be made double. The inner one of heavy tin, and the outer one may be of galvanized-iron. 2. Three or four inches of water should surround the tin tank. Then kerosene, coal or wood may be used to heat with. —G. L. Tinker.

1. Our tank is square, and made of copper. Galvanized-iron would do. 2. Honey runs too much risk of being spoiled if liquefied in a tank placed directly over the fire. Place your honey in a water bath, to be liquefied *au bain marie*.—Dadant & Son.

You should have your honey tank (probably tin) encased in a sheet-iron tank, placed over a furnace, and so constructed that you can convey water into the sheet-iron tank to the requiste depth, and heat it gradually until the desired result is attained.—J. M. Hambaugh.

1. Why not use smaller tin cans, and leave them open to ripen the honey. 2. If granulated, and we wish to liquefy, place these cans in a boiler of water or other large tank. Be careful that the cans are raised a little from the bottom of the boiler before the water is heated. —A. J. Cook.

1. Large cans holding, say, 150 pounds, made of heavy tin, or galvanized-iron would, I think, be preferable to a tank like you mention under the circumstances. 2. The cans could be placed, one at a time, in a large kettle containing water, or even placed in a large wash-tub in a warm room, and hot water poured around the can.—Mrs. L. Harrison.

1. Of heavy tin or galvanized-iron, made circular, with flat bottom, like a common two-quart pail. 2. If you must do it in that way you could have a shallower and somewhat larger vessel placed so that fire could be introduced under it. Put the tank in this on thin strips of wood before filling. Fill the shallow vessel with water before heating.—R. L. Taylor.

1. Do not do it at all; you will have a dirty muss of it. Get a tinner to make you a large round boiler, with an outer case around it, so that the water will surround your boiler. Have a honey gate to pass through the outer case into the boiler to draw off the honey. 2. Fit the melter or boiler to the top of a large stove, and fire up. Shovel your candied honey into the melting can or boiler, and as fast as it liquefies, draw it off into your shipping vessels. You cannot liquefy honey by *direct* heat without damaging its flavor.—G. W. Demaree.

Tin is better than galvanized-iron for a honey tank. It would be better to use the 60-pound tin cans. In these the honey can be liquefied more handily than in such a large tank as is mentioned in the query. Sheet-iron will do for the outer tank, which must allow water all around the honey-tank and at the bottom of it.—The Editor.

Topics of Interest.

Making Queen-Cell Protectors.

G. M. DOOLITTLE.

A correspondent writes thus: "Please tell us something in the AMERICAN BEE JOURNAL about queen-cell protectors. How are they made? How do you put in the queen-cells? How do you fasten, or hang them, to the brood-frames; position on frame, etc.?"

If I am right, the idea of caging queen-cells so as to keep the bees from destroying them, and at the same time allowing them to hatch in the hive and let the queen walk right out among the bees, the same as if the cells were not caged, originated with me; and was brought about by the loss I sustained in trying to make something work which others said was a success; but which proved a total failure with me, namely: The placing of a nearly mature queen-cell in a colony, or nucleus, at the time of taking away a laying queen.

Many still say that they have no trouble in thus giving queen-cells, and if they tell the "whole truth and nothing but the truth," this article will be of no benefit to such. The cell protector is made by rolling a small piece of wire-cloth around a V-shaped stick, and while in place, fastening the side which is out, by sewing in a wire, so that a small, but not a very flaring, funnel is made, the hole in the small end being as large as an ordinary lead-pencil.

Some of the supply dealers keep them for sale in the stamped form, but as I have used both, I prefer the home-made ones, as above, for the reason that the points of the wire-cloth, which stick out all around the hole in the small end, seem to prevent the bees working away at the end of the cells as much as they do with the others; for at times, with the pressed ones, they seem to think that the cage should not be there, and as the end surface is smooth, so as not to discommode them at their work, they bite away at the wires and the cell until the end of the cocoon covering is eaten through, and the queen destroyed. After having several failures with those bought, and none with those made at home, I studied into the matter and came to the above conclusion, which, I think, is right.

Having the protectors made, we are ready for the queen-cells. If the cells are built from the wax cups (my book on Queen-Rearing tells how these cups are made), there is no trouble in picking the cells off the stick they are built on, and slipping them into the protectors; but if they are built in the ordinary way, on the surface of the combs, a good deal of trimming will have to be done to have them go well down into the point of the protector, as they should.

The ends of the cells should go down to within three-sixteenths of an inch of the small end of the protector, or to within that much of the extreme outside points of the wires, so that when a bee goes in to attack the end of the cell, these wires are continually "punching" her about the thorax as she moves around. If any cell will not thus go down, trim it until it does.

If you cut through the cell at or near the base, so you can look in and see the queen, it will do no harm, for when the cell is caged, the bees cannot get at these open places to tear the cell to pieces and drag the queen out, as they always will where a cell is mutilated and left unprotected. This one item alone, of being able to save all cells, no matter how closely built together, will pay all to make and keep a few of these protectors on hand; for who has not destroyed many cells in years gone by, in trying to separate two or more built together?

If the cell is not hatched when I think, perhaps, it should be, I take it out of the protector, cut a hole or slit in the side near the base, to see if the pupa is all right, sometimes taking them out in my hand and looking at them until I am satisfied, putting them back in the cell again, putting the cell in the protector, and the protector back in the hive; the bees nor the queen being any the wiser for the curious eyes that have peered inside the sacred domain, she hatching out as perfectly, in due time, as she would have done had the cell been left on the comb where it was first built.

After the cell is in the protector, I use a piece of a corn-cob to keep the bees away from the base of the cell. I formerly used a cork, but I like the cob the best, as the roughness of the cob keeps it in place without fastening, while the bees would sometimes work out the cork, unless it was fastened in. To keep them in place where I wished them in the brood-chamber, I formerly used a small wire, running this through the meshes above the cork, and twisting the wire to keep the cork from sliding out. The upper end of the wire was now bent so as to hook over the tops of the frames, and thus the cell and protector were kept where I wished them.

Some seem to prefer this way still, but instead of doing this now, I take out the comb I wish the cell on and, at the place I wish it to stay, I make an indenture in the comb with the side and end of my little finger, and into this indenture I place the big end of the cell-protector, and by pushing against the cob stopper the cage is so imbedded in the comb that it is a fixture there. When this comb is placed in the hive, and the frames properly spaced again, the face side of the opposite comb rests against the protector, and thus it is kept in place, should the bees desire to work it out.

If the weather is cool, or the bees few in a hive, I insert the protector so that the point of the cell comes near the place of termination of the highest part of the brood in the comb, for at this place there is the most heat of any place in the hive. If the weather is warm, and there are plenty of bees in the hive, I push the protector into the comb at any place where it is the most convenient. The piece of wire-cloth used in making the protector is about 2½ inches wide by 3 inches long, but it can be varied to suit.

Borodino, N. Y.

Improving the Markings of Bees.

REV. W. P. FAYLOR.

To improve the color of our bees, as well as their utility, is certainly a part of apiculture that should not be neglected; and, by the way, this very thing received considerable attention last season, and will receive more consideration this year.

Let it be distinctly understood that I am no advocate of any certain number of yellow bands. If our Italians, when left to themselves, would hold or retain their distinct markings, the matter would be different; but experience has proven beyond a doubt, that our three banded Italians, when left to themselves to rear their own queens and drones in nature's way, in a few generations lose all the yellow in exchange for the brown or black.

The question naturally arises, how shall we keep our bees handsome? To begin with, if we desire to rear queens that will be yellow to the tip, it will be necessary to make the bees start the queens from the egg, or very young larva; for queens that are reared from advanced larva are usually dark in point of color, and those reared from the egg are always bright.

Yet we may rear nice golden queens and our bees not be very handsome, either, if we do not look after our drones. To attain the most desirable results, it is best to hand-pick the drones of a handsome colony. This can be done in July or August, during a spell of drouth, when all drones are usually exterminated, but the ones in the hive we have kept.

To keep drones in a hive, we have only to make a colony queenless, and see that it is kept queenless during a spell of drouth. If necessary feed the bees occasionally, then, on some cool day, go through the hive, examine every comb, and pinch the head off of every drone that is not nice and yellow.

Now, if your virgin queens, reared from the egg, mate with these handsome drones, you will have something to be proud of. If one resides where drones are abundant during all the Summer, then try the experiment late in the Fall —even after the frosts come.

I would not advise late breeding, as queens are less prolific when reared, while the normal heat of the bees is too low. I have some bees at present that are nearly as yellow as gold—showing only a little black at the tip. As far as my observation goes, these yellow bees come out ahead every time, and are just as much an improvement over the three-banded bee as the Poland-china hog is in advance of the old "Elm Peeler."

HOW TO ITALIANIZE AN APIARY.

Had I 40 colonies of black bees to be changed to Itallians, I would buy a good breeding queen (only one), and introduce her to one colony, and see that this colony was strong in bees and brood by the beginning of June, at which time I should give them some nice drone combs; then, as soon as young drones begin to crawl out of their cells, I would give this colony two or three bright combs—putting them in the center of the brood-nest.

In two or three days, when the combs are well filled with eggs, remove the queen, and all other combs with unsealed larva, from the colony. Now, I would stimulate this colony by feeding. In six or eight days from the capping of the cells, cut out a queen-cell for each colony made queenless a few days previous, and insert the cell in a middle comb of the brood-nest. Always take enough comb with the cell, so as not to compress the cell in the least.

Be sure to destroy all other cells started by these black bees.

I would keep this old colony, rearing these cells, queenless so as to preserve the drones, as the drouth will usually have ended the black drones before this time. We can also keep our bees pretty free from black drones by shaving down the drone brood once every 15 days.

No man ought to think of having 40 colonies of Italian bees without a book treating on bees and queen-rearing. The above is one easy method of Italianizing.

State Line, Ind.

How to Rear the Best Queens.

C. L. FISHER.

Why not produce 20 good queen-cells in each batch, as well as 12 or 15, as nearly all queen-breeders claim to do? They say, because a colony cannot furnish enough royal jelly to properly mature a greater number. Very good! We know that to rear the best queens the cells must be well supplied with the food, but here I will say that I believe there are more queens put on the market that were reared with too little of the jelly, than there is of those that had plenty.

A few years ago I reared queens quite extensively, and, not being suited with any of the old or new methods in detail, I aimed to improve on them so as to produce queens superior to those reared under the swarming impulse—if such a thing was possible—and I will try to prove to you that I succeeded, for I never bought queens as prolific and long-lived as those I reared by my improved method, some points of which were taken from both Doolittle's and Alley's methods.

When I am handling combs, or overhauling colonies of bees, I save all the little queen-cups that I find. I fasten these to combs, ten or twelve to each comb, in such position that they can be removed without disturbing one another.

About April 15 I unite two good colonies of bees, and introduce my breeding queen, then feed them a little each night to induce rapid building up, and cause them to have a desire to swarm about the time I want to start my first batch of cells.

Now, examine the combs carefully, and if you find any queen-cells started, destroy them, for you do not know their exact age, and when they would hatch—which you should know. Hang two of the combs which contain the queen-cups in the hive near the center, and look at them night and morning until you find eggs in the cups, then you will know when they will hatch.

Allow them to remain in the hive three days after the eggs hatch. At evening of the third day, select a strong colony, well supplied with young bees, remove the queen and all the brood and eggs (be sure to get every egg), close the hive with wire netting, and carry them into the cellar. Let them remain there until 8 o'clock next morning, then put them out on their old stand, take the combs containing the partly fed queen-larvæ from the breeding hive, and brush (not shake) off the bees, and quickly put them into the other hive. After ten minutes give the bees their liberty.

By following out this method your queen-brood will get a double supply of jelly, and what is left after the queens hatch will appear as fresh as when first deposited in the cells, and the queens thus treated will be something extra.

When you remove the cells from the hive containing the breeding queen, look over the remaining combs, and if you find any cells, remove them, and give the colony another set of combs containing queen-cups, and you will at once get eggs in them.

Proceed as before, but do not use colony No. 2, that has just matured one brood of queens, but give them the brood and queen from another colony, and use that one to finish off brood No. 2.

By this method, you can produce a large number of extra-fine queens from one breeder with very little trouble.

South Deerfield, Mass.

The Bee-Keepers' Union.

E. FRANCE.

Shall it be united with the North American Bee-Keepers' Association? As a member of the Bee-Keepers' Union, I say, *no*. The two associations do not belong together. The North American Bee-Keepers' Association is composed for the most part of annual members, who join when the association happens to meet in their neighborhood. There are a few who go every year, but the number is very small in comparison to the numker that belong to the Bee-Keepers' Union, and the latter has not one-tenth part of the members that it should have.

I do not see why it is that so few bee-keepers are willing to join, when the Union has done so much to defend our rights. Every bee-keeper in America is benefited by the Union. Then why not join and help the good work? Just put in one dollar a year, and be in a position so that, if you get into trouble, you can call on the Union to help you to defend your rights.

There is a great deal of prejudice and superstition about bees, and many think that the bee-keeper is stealing his living from other people's property. They claim the bees have no right to come on their land to gather honey. The land is theirs, the crop is theirs, the honey is theirs, and we have no business to let our bees go onto their land to gather honey. If the bees take the honey, the pasture is not as good, or the hay has lost a valuable part of its nutriment if the bees take the honey out.

Some may kick because the buckwheat failed. They say the bees blasted it by taking the honey; others say the bees have spoiled the apple crop. Some say the bees injure the corn crop by working on the tassels to gather pollen, and there are a great many other things that I hear advanced every year—just such nonsense about something in connection with the bees.

Now, let one of those superstitious men get mad at you. He wants to spite you somehow, he does not care how. If he thinks there is a possible show for him to make a case, he will sue you for damage done him by your bees. All there was to the Freeborn case was spite and ignorance. The man claimed that Freeborn's bees worked on his clover, and kept his sheep away so the sheep became poor, and died the next Winter in consequence.

This was the first case that the Union had to deal with, and was thrown out of court, giving the Union its first victory. The Union has had several cases since then, all victories. If you join the Union, you are entitled to help in case you are sued by any of these ignorant chaps.

We ought to have 5,000 members; then we should have a sum in the treasury that would command respect. Now is a good time to join. Commence with the year. Send your dollar to Mr. Thomas G. Newman, 246 East Madison Street, Chicago, and become a member of the Union. Do it now, before you forget it. In union there is strength. A man may be a bee-keeper and be a poor man. Now, you see some of his spiteful neighbors may take a notion to pitch into him, knowing he is poor, just to annoy him, and make him expense. But if they knew he belonged to the Union, and he had an army of bee-men to fight the battle with him, they would let him alone.

There have already been several threatenings hushed up because the bee-keepers' enemy had to look the Bee-Keepers' Union in the face.

About the North American Bee-Keepers' Association, I think it is a good institution. I am sorry that I have not been able to attend the meetings. But it costs money to go, and this year money was scarce with us. About a dozen of us tried to get cheaper rates on the railroad, but failed, and so did not go.

Next year it is away down in Albany, and, of course, but few from these parts will be there, and so it goes, skipping about from one place to another, all over the continent. Well, that is all right. The very name of the association calls for it moving about from place to place. But, no matter where the meetings are held, we can all get the proceedings in printed form, and I value these very highly. Unless we attend, however, we miss the social part of the meeting, and the social part would be a big treat to me.

I do not see how we can mix these two institutions together. They are very different. The Bee-Keepers' Union does not have to meet anywhere to carry on its business. We pay our dues, and elect officers by ballot. All is done through the mail. I do not see how the Union could be benefited by consolidating with the North American Bee-Keepers' Association.—*Gleanings.*

Platteville, Wis.

Taxation of Bees in Iowa.

WM. PEARSON.

Bees are taxed in this (Jasper) county, this Spring, from $1 to $1.50 per colony, which seems contrary to law, as quoted by Eugene Secor, in AMERICAN BEE JOURNAL for October 19, 1889. He says:

> The question, "Are bees taxable?" must be decided by the laws of the State where they are kept. They may be taxable in one State, and exempt in another; therefore, what I shall have to say on the subject relates only to Iowa.
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> If I remember rightly, this question was ably answered in these columns several years ago, by Dr. Oren, but as there are undoubtedly many new sub-

scribers, I will give my interpretation of the Iowa law. Indeed, it needs no interpretation, the statute being so plain that any one, it seems to me, ought to be able to understand it. I will quote from the Revenue Laws, and from Section 797, which is the section specifying the exemptions: "The following classes of property *are not to be taxed*, and they may be omitted from the assessments herein required." Paragraph 4 of that section reads, "Animals not hereafter specified."

Taxable property is "specified" under Section 801, and the "Animals" therein named are "horses, cattle, mules, asses, sheep and swine." That is all the law there is treating directly or indirectly on this subject, except the quotation below.

Now, one question that is likely to arise is, "Is a bee an animal?" If not, they may be classed in the "All other property, real and personal," which "is subject to taxation in the manner directed." But if bees are not animals, what are they? Webster defines the word animal thus: "An organized living being, endowed with sensation and the power of voluntary motion; and also characterized by taking its food into an internal cavity or stomach for digestion; by giving carbonic acid to the air, and taking oxygen in the process of respiration; by increasing in motive power or active, aggressive force with the progress to maturity."

Bees are animals. Some try to excuse their consciences for wanting to tax bees on the ground that they are property, and ought to share their just burden of taxation. But bees are not the only animals exempt, yet we seldom hear of a word of complaint regarding the others. Geese, turkeys, hens, pigeons, guineas, peacocks, *dogs, cats, tame rabbits and fish are all animals, yet the assessor never inquires after the amount of capital that we have invested in them. They are exempt under the section above quoted.

I may open a poultry farm and invest $5,000 in fine birds, yet the stock would be exempt under the law. I may construct a carp pond, and raise fish enough to supply my family, but the carp are exempt. I might start an ostrich farm, and the birds would be exempt from taxation under the present law, even though they cost $1,000 apiece. The proper tools of every farmer and mechanic to the amount of $300 are exempt from taxation.

If the Legislature had intended that all the above-mentioned animals should be taxed, they would not have exempted them.

As an instance where visible property wholly escapes taxation with the sanction of law, take poultry. The census report for 1880, shows the number of all kinds in the State on June 1 of that year, to have been 8,539,714. At 20 cents each (not an extravagant estimate), the value was more than a million and a half dollars ($1,707,942). The value of the eggs produced in 1879, at 12 cents per dozen, was $3,870,471.

The number of colonies of bees in the State is not given in the census report for 1880, but the honey produced in 1879 was 1,310,138 pounds. At 12½ cents per pound, the value was $163,767, about one twenty-third part of the value of the product from poultry. We do not hear anything about taxing poultry, and I think that it is about time that they give the bee-keepers a rest.

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*Under a recent law, dogs are taxed, but it is a sort of a *per capita* tax, and not according to the value of the animal. Its object is to raise a fund with which to pay losses to the owners of sheep or other domestic animals, caused by dogs.

Protection of Single-Walled Hives.

GEO. R. WELLER.

In building a house, the most important consideration is the foundation. If that is as it should be, any kind of house can be put upon it—brick, stone or wood, high or low, wide or narrow, and it will stay there, and give satisfaction.

As with a house, so in the bee-business; the foundation being right, we can winter in the cellar or outside, can work for extracted or comb-honey, can contract or expand, tier up, etc., as circumstances or individual whims may dictate.

Such a foundation, or bottom-board, is made of two pieces of ⅞-inch lumber, 4 inches wide, and 8 inches longer than the hive to be used. For the back end, nail these pieces to the ends of a piece 4 inches wide, and long enough to make the frame 8 inches wider than the hive. Nail the front ends to a piece as long as the back one, but wider. This board is nailed in slanting, its lower edge even with the lower edge of the side pieces at their front ends, the top edge even with their top edges, 5 inches back of their front ends. This slanting end is the alighting-board.

On this frame nail a top of good, matched lumber—the thinner the lumber the lighter the hive will be when complete. Let the front edges of the top be even with the front ends of the side pieces, and cut an entrance in this top, ⅜x10 inches, equidistant from the sides, and 5 inches back from the front edge, giving it about the same slant as the alighting-board, nail a bottom to the frame (the tighter and lighter the better), and paint the sides and ends. On this foundation build the hive, and neither heat, cold, snow, rain nor ice shall prevail against it.

SOME OF ITS ADVANTAGES.

Standing or hanging frames stand squarely on this bottom, their front ends in front of the entrance. No extra time or strength is required for the bees to clean their hive, as the dead bees, etc., roll down and out from the inside of the bottom of the hive.

The upper part of the alighting-board is cool on the hottest days, being in the shade, so the guards are always outside the entrance, ready for robbers as they alight. These same guards are out of sight, and do not bother so much when manipulating the hive, or passing back of or by its sides.

The alighting-board being protected from the wind, the loaded bees, when tired, get in quicker. The entrance being in the bottom of the hive, they have a shorter distance to crawl with their loads.

Robbers are driven away easier and quicker down hill than on a level.

No rain or snow will be driven into the hive, and ice cannot form in the entrance.

In packing or unpacking the entrance is no bother.

The sun does not shine on the entrance in Winter, causing the bees to come out and perish on the ice or snow.

The bottom of the hive, protected by its 4 inches of dead air, will be free from moisture. The list could be extended, but this will answer.

A box the size of the bottom, and 6 inches higher than the hive to be used, is made, as light as possible, well painted, and water-tight. A couple of headless wire nails driven part way into the bottom, fitting into corresponding small holes in the lower edges of the box, holds it securely against all comers. A well-painted, water-tight top, very light, of the gable pattern, is used. The eaves project, and the ends telescope down over the box enough to make it rest solid. In each gable end a large auger hole is made, into which is fitted a wire bee-escape, which any one can make for less than 5 cents per dozen.

The best paint is "Prince's Metallic;" it costs, dry, from 1½ to 3 cents per pound, and is dark brown. One pound will cover as much surface as 2 pounds of common paint, and will last three times as long. It is 79 per cent. pure iron. Do not confound it with the other brown paints made of burnt earth, commonly sold as "railroad" or "barn" paints. The genuine will turn very much darker after being used, owing to the action of the air on the iron.

PROTECTION OF SINGLE-WALLED HIVES.

In the Fall, as soon as there is danger of frost, I see that each hive has enough stores for Winter, and enough sawdust is dumped in with a scoop shovel to fill each outside box to the top, care being taken that it packs down even, but not too tight, the top is put on, and—there you are!

Mr. Heddon wants the top down tight on the sawdust, but I do not. If the roof is as tight as it should be, some moisture will accumulate in the sawdust underneath. The sawdust must be dry to keep in the heat and absorb the moisture from the bees, for on this their health depends, therefore, the pitch of the roof is full of air, which circulates freely through the large auger holes in the gables, the brown paint absorbs all the heat available, the heat and free circulating air keeps the sawdust dry, the dry sawdust keeps the bees warm and dry—the two requisites for their safe wintering on a minimum of stores. Some moisture comes in under the lower edge of the outside box, but rapidly drys out, because of the construction of the bottom-board.

The climate here is dry, but where it is not dry, the outside box should be large enough to slip down over the bottom-board a half inch, and rest on cleats. When the indications are for zero weather, I cork up all but a half inch of the entrance with paper—a little of such air goes a long ways—and leave it until Spring, as it keeps out robbers, and economizes heat. If the bees need more passageway, they will eat it out. As the sun never shines on hive or entrance, they do not come out when they would be lost by the cold. They come out whenever the air is warm enough, as it penetrates the hives. A flight or two during the Winter, often means life or death to them. During the mild days of Spring, their house holds heat well, and as but few have to stay at home to keep it up, most of them get out and rustle.

Their bowels have been emptied as often as practical during the Winter, they have been dry and warm, they feel good, and if there is anything to be had in their line they get it. Result: Brood-rearing commences and goes on apace. I can hear the peculiar hum that indicates that they are all right.

When the honey harvest begins in earnest, they are ready—the hives are full of brood and bees. Then I raise the outside boxes, sweep the sawdust over the sides of the bottom, and leave it there, as it prevents weeds and mud about the hives, any surplus being scattered by the wind, and where sawdust can be had conveniently, for the hauling, it is cheaper to get a fresh supply in the Fall than to gather this up and save it.

I now tier up, expand, etc., as necessary. Those who wish to, can leave the outside boxes off; I do not. I put them back, and as I tier up the hive, I tier up the outside box correspondingly, so that my hive is enveloped in a pretty good dead-air space, and has ventilation through the holes in the gables. In handling the frames, the outside box is frequently not disturbed, and if the bees get out of the hive into it, I do not mind it, as they soon get out through the bee-escapes in the gables.

Mr. Heddon wants light-colored hives in the Summer to throw off the heat. I do not; I can use all the heat available, as all the nectar brought in must be evaporated, more or less, according to circumstances, to make it into good honey, and the quicker this is done the better the product. The warmer the hive will average, the quicker this will be accomplished. During the greater part of the twenty-four hours, the average temperature is lower outside the hive than inside, and the few hours during which the direct rays of the sun would warm it above the normal, are more than offset by the many hours in which the cooler outside air would bring it below their normal temperature, every degree of which must be made up by more bees remaining in the hive and consuming honey to generate the heat needed, thus entailing a double loss.

Bees consume less honey during the Winter, when in the cellar or in packed hives, because they have to generate less heat than when more exposed, so in the Summer, they use less honey for the same reason, consequently have more for surplus.

The dark-brown outside box, double bottom, and roof, absorbs the heat—get hot clean through—the dead air inside, and the inner, or hive case, acts as a cushion to keep it from the bees, and my bees never get too hot to work. As the heat of the day declines, the heat absorbed is slowly given off, but protected by the double walls and dead air, it goes slowly, while the bees in single-walled, unprotected hives will have begun generating heat, and consuming honey therefor which otherwise would be surplus, many hours before mine will; or, if they do not use honey to keep up the heat, they cluster to economize it, and the part of the business most interesting to me stops for the time. Evaporation is facilitated in proportion to the extra number of hours the temperature is kept up. If wax is to be made, less artificial heat is needed, less honey is used, and more bees go to the fields.

Such a hive costs more than the dovetailed, for instance! Yes, it does. However, the inside parts I use correspond to the outside, and lessen the cost, and if made in large quantities, with improved machinery, the hive complete, would cost but little more than the dovetailed, and much less than the chaff, but I have no hives to sell, neither have my friends.

This "protection for single-walled hives" pays in proportion to the skill with which the bees are handled; and skill does not mean everlasting fussing; neither does it mean always the most hard work. The average surplus, per hive, is often increased by the work, sometimes by the fussing, but in either case the extra pounds cost more than they will bring in market. Skill with any hive will beat the best protection without it, but the best skill with it, will beat the same skill without it 20 per cent., one year with another. The best tools skillfully used will pay when inferior tools in the same hands fail, in any of the trades, in the professions, on the farm, and in the apiary.

This question of cost is dwelt on more in bee-literature than in that devoted to any other pursuit, for in other industries the fact is generally recognized that the best tools and process will win in the long run, and the poor men are not all in the bee-business.

Let it be thoroughly understood that none but the rich can afford to buy poor goods; it is wrong to teach anything else, as it causes want, and consequent suffering. If I cannot get 10 good hives, I will get 5; if I cannot get 5, I will take 1; if I cannot afford the one, I will do the best possible for the time, and get the best as soon as I can.

This subject of the protection of single-walled hives is important, and every suggestion for its improvement counts in the struggle for the survival of the fittest.

In the contest of Cellar *vs.* Out-door wintering, bee-periodicals during the last few years, indicate that the latter is slowly gaining. The failure of the honey supply incident to cultivation, is gradually destroying the large bee-ranches. I believe that apiaries of 50 colonies and under now furnish more than half the honey, and that they are on the increase. Their business will not justify an extensive outlay for plant and fixtures, neither is it necessary, for by the proper protection of single-walled hives, using the best fixtures and the best methods will result in the most surplus of the best quality, and at the least cost.

Berlin, Mo.

When and How to Use Separators.

R. C. AIKIN.

The beginner seems almost confounded at the diversity of opinion, and there is some excuse for him, too.

One says we must use separators, and another says they are useless; no need of them at all. Suppose A has 100 colonies, and does not want any increase. He uses all means to prevent swarming, and when the honey-flow comes on he has big colonies, and keeps them so. He uses full sheets of foundation in sections, and has an immense lot of bees in each hive, so that they occupy not less than two supers, and some three and four.

The weather is warm, and the flow may not be extra heavy, but with such a force of bees, even in a light flow, they are bound to bring in lots of honey. The whole super, or supers, are worked at once, and filled, too, and a fine lot of straight combs is the result. Under such conditions, and with a good to extra honey-flow, there will be *very few* combs that cannot be crated; and no separators used, either.

Now comes Mr. B. He lets his bees swarm, or divides them, and the colonies are so weakened that they cannot possibly occupy more than two supers at one time, even with warm weather and a *good* flow. If they do manage to stretch out that far they cannot send out enough field workers to rapidly fill the sections, so they try to remedy matters by working one side at a time, and so make a lot of one-sided sections, if separators have not been used.

A very strong colony will, in a light flow, build as straight combs as a light colony will in a good flow.

We have no standard by which we can measure or judge, and say this colony or that one is strong. I mean no general standard, for each man is "a law unto himself," and decides according to his own judgment, and what one man calls a *very strong* colony, another calls, perhaps, fair to average; and so it goes. Each one writes his views, and they differ. Why? Because the circumstances are different. Now, I will give you a plan that I think will work in most cases. There will be some exceptions; but only a few:

If you will so manage your bees that when the flow comes on you will have so many bees in each hive that a 10-frame Simplicity hive will not begin to hold them, and so that you have to add another story to give them room to cluster, or, perhaps, put on supers for the same purpose; then you can get reasonably straight honey without separators, if not over 1⅞ sections and full sheets are used.

If you have no home market to take the few bulged sections, you may have to use about two separators to each super, and then you can crate it all nicely. But if you allow swarming, or divide so that colonies can work but one super at a time, it will not be safe to leave out the separators.

Have every colony so strong that when the honey-flow comes on they can send as many bees to the supers as are needed in the brood-camber, and as many to the fields as are found at work in the whole hive; or, what is better, have bees enough to occupy and work three or four supers at one time. A colony cannot do good work if given too much room. Let each colony be kept on just what combs and sections they can work and keep warm when at least one-half the bees are in the fields.

The past season I had the care of over 125 colonies that were not allowed to swarm, and all were bred up just as full as possible. The more prolific colonies were made to help the weaker ones, until each colony was so full of bees that we gave them from two to three brood-chambers (10-frame), room to cluster and keep themselves cool. This great strength was, of course, not attained until the flow was just about to commence.

When the flow began, those colonies would occupy, on an average, about three supers; a few having only two, a large majority three, some four, and a very few having even five supers. Now, with all this room, at night, when all the bees were at home, they would lie out, with an opening all the way around the hive, except at the back, the front being raised from the bottom-board and blocked up at the front corners ⅛ to ¾ of an inch.

We used separators, but only put two in each super, so that there were two rows of sections, a separator, three rows, another separator, then two rows. So there was only one row of sections—4 out of 28—that did not have a separator on one side; and not one out of 1,000 but could be crated almost as fast as they could be handled, except once in awhile where a foundation had fallen down.

Let it be remembered, that this is not so hot a climate as it is further from the mountains, and almost any night we can sleep under one or two covers.

Writers should tell us more about the system they use. There are many roads by which we may travel, and all will take us to the same place. But one goes by Doolittle's, another by Dadant's, a third by Heddon's. Then there is the Elwood-France route, and a good one it is, too. Now, when we go by these routes we must remember that they are not alike, and it will not do to put on the brake just at the same time and distance on each, but keep your eyes open, and put on brakes, or use the whip, when needed.

Ft. Collins, Colo.

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What Causes Foul-Brood, but Contagion?

C. J. ROBINSON.

Some time ago a correspondent of a bee-periodical propounded a problem of great importance to bee-keepers. The question reads: "What causes foul-brood to start in an apiary, when not introduced from another that has it?" Mark you, that the question recognizes, as a fact, that foul-brood does occur when *not* introduced by contagion. The problem does not involve any question as to whether or not foul-brood ever originates in a colony spontaneously, but only asks what causes it to start independent of contagion.

The editor, in attempting to answer, totally ignores the plain import of the question, and rules out the only point submitted, to-wit: What starts foul-brood when not started by contagion? He says:

> I am sure I am right when I tell you that foul-brood never starts in an apiary unless there has already been some of it in the vicinity, or some honey, in some shape or other, has, by some means, brought it into the locality, and the bees have been permitted to get a taste of it. Foul-brood can no more originate itself than can a hill of corn originate itself. Chilled brood, suffocated brood, or dead brood, can in nowise or manner originate foul-brood. I have conversed, in regard to the matter, with our best professors of entomology, and with scientific men familiar with all the problems of spontaneous generation and vegetable life. There is no such thing as any plant or animal starting up without a seed or germ.
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> Varieties may grow and develop, and new species may be originated by natural or artificial selection, but no plant starts up unless the seed was planted by nature or by man. Sometimes it is a little difficult to tell just where the disease did come from, but let an expert look the matter over, and I think he will tell you, generally, where it was contracted.

If the doctrine advanced by our good friend could do no serious injury, I would not interpose a criticism, and I am only prompted by a desire that bee-keepers have knowledge of facts that are susceptible of being, and have been, proved, instead of grave error. It is because bee-keepers have been uninformed as to "what causes foul-brood to *start*," that so much injury has been done by it. There can be no need of treatment to cure, in but few cases, when the *cause* is generally known.

It appears that the editor has not investigated the cause of foul-brood, yet he teaches everybody who is equally as competent as himself to deal with the problem, that his guess is "right." His illogical view of the case in question, his belief or disbelief counts no more than did the views of the self-inspired "scientists" who disbelieved Newton's theory that the earth "do move."

The editor says: "Let an expert look the matter over." I agree with him, that experts are competent to teach matters in which they are skilled.

Kindly, I ask correspondents, whether or not it is always proper to bear in mind, when we write for publication, that it is not justifiable to record our individual belief—"I believe" so and so—but mention no special reasons for such belief? We ought to be mindful of the fact that mere belief goes for naught. If I cannot believe the account of Jonah remaining three days of his life in a great fish, and believe that foul-brood originates from fermenting dead brood, that it never originated otherwise, quite probably my intimate and most highly esteemed friends are sanguine in the belief just the reverse of mine.

Certainly, editors ought to be guided by acknowledged rules recognized by courts the world over, in searching for truth and facts in cases in dispute. Witnesses are not allowed to speak of their belief. Expert testimony is admissible under rules, but it seldom counts. Writers are regarded in the light of winesses, and they should (and many do) regard their writings as testimony given on the witness stand. Of course, logical theorizing is all right.

The teaching that "foul-brood can no more originate itself than can a hill of corn," sounds very illogical, for the comparison is not well taken, there being no similitude—in nowise analogous. Corn had an origin, and *hills* of corn is a reproduction of itself. Foul-brood never came into existence in the organic nature of "itself," nor is any putrified substance a created organism, but all putrid matter is disorganized bodies, whose elements have been newly arranged, forming new compounds, such as foul-brood and other decomposed bodies. Foul-brood is neither plant nor animal, and it has no semblance in nature with corn.

There are several close-observing bee-keepers, equally as competent as the editor, and who record substantially the allegation that foul-brood originated in one or more of their colonies. The allegation can be read in bee-periodicals, and it has been discussed in conventions. The expert bee-keeper, Wm. McEvoy, who is the competent official foul-brood inspector for the Province of Ontario, Canada, declares that he discovered that foul-brood originated in his apiary. This positive testimony does impeach all recorded opinions offered, holding that foul-brood "never *starts* in an apiary unless there has already been some of it in the vicinity."

The editor states that he has "conversed, in regard to the matter, with our best professors of entomology, and with scientific men familiar with the problems of spontaneous generation and vegetable life."

Well, how can this be properly offered as argument pertaining to the problem? Really, what has professors of entomology—as such professors—to do with the case? The issue made by the editor in nowise pertains to entomology, nor to raising corn. It is a noticeable circumstance that none of the "professors and scientific men" have uttered one word that prompts readers to believe that they corroborate the editor's doctrine as he recorded it. Prof. Cook, the scientific entomologist, who is a hundred times more competent to deal with the problem, and who wrote much concerning foul-brood, has not broached the subject of the origin of the disease.* He is learned and sound, so he does not "rush in where angels fear to tread."

The importance of the truth concerning the origin of foul-brood, being laid before readers of bee-periodicals is evident when it appears very probable, or possible, that it is liable to originate from neglected dead brood in colonies.

If discussing the subject prompts investigation, and thus light creep in and dispel the dark parts of the problem, the result must prove of untold benefit to the whole world.

Richford, N. Y.

* See editorial note on page 566.

Perforated Zinc Queen-Excluders.

DR. G. L. TINKER.

Now that queen-excluders are coming into use so extensively, both in this and other countries where bees are skillfully managed, bee-keepers are naturally desirous of knowing what material makes the best queen-excluder, and how they are constructed.

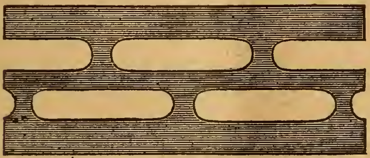
I have found every kind of queen-excluder made of wood alone impracticable, on account of propolis, and in this my experience is corroborated by that of all others who have fully tested it.

As perforated sheet zinc is without objection in this respect, is cheap, durable and easily manufactured, it is preferred to any other metal. It has been extensively used in whole sheets, and in the one and two-rowed wood-zinc combination.

The whole sheets make the cheapest queen-excluders, but are not without several objections. They easily sag down in the center, and must be supported by a strip of wood underneath and crosswise of the brood-frame, or in some other way. They are also a slight obstruction to the passage of the worker-bees. Their practical advantages, however, are so great in other respects that their use is universally conceded to more than off-set any objection that may be urged against them.

The one-rowed wood-zinc combination was that first invented and used by the writer. In strips ½-inch wide the wood came so near the perforations that the workers could pass without hindrance, but if strips ¾ of an inch wide were used, unless let into the wood very deeply, they proved a hindrance to the free passage of the workers, the same as the perforations in whole sheets of zinc. The great objection to one-rowed zinc however, was the fact that there were not enough perforations in the queen-excluder, when the zinc was spaced with the wood the same as the brood-frames, to enable a proper ventilation of the supers.

The result was slow ripening of the stores, that did not so much matter when the flow of nectar was moderate; but in a great honey-flow, with large colonies of bees, the trouble from this cause is so great as to warrant the removal of the excluders altogether. I then made the first two-rowed zinc, and found no further trouble about the ventilation of supers.



TWO-ROWED PERFORATED ZINC.

The difference in results may be seen when the number of perforations is taken into consideration. The one-rowed wood zinc queen-excluder, as usually made, contains only from 150 to 175 perforations about 9-16 of an inch long. The same spacing and construction with the two-rowed zinc gives from 300 to 400 perforations ¾ of an inch long, and they give ample ventilation and afford ready passage in the largest colonies.

As the construction brings the wood very near the perforations, the bees are able to pass the zinc as easily and as quickly as over any part of their combs, so that there is not the least obstruction or hindrance to worker-bees in passing the two-rowed wood-zinc combination. It, therefore, constitutes the only altogether perfect and satisfactory queen-excluder.

Another point to be considered is the size of the perforations. To be queen-excluding, and yet allow the free passage of the workers, requires the finest adjustment. A variation of less than 1/64 of an inch will permit the passage, also, of the queen—or at least, many of them—for there is considerable difference in the size of queens, or, rather, in the size of the thorax.

The thorax of the drone is so large that a 3/16 inch perforation excludes him, but the queens will easily pass such a perforation, as a rule.

The worker-bees are able to squeeze through a perforation 5/32 of an inch, but perforations of that size are impracticable because so difficult of passage, and the perforation will only allow free passage when large enough to admit the bee's head without wedging.

I have a size of perforated zinc made in my earlier experiments, that is considerably larger than 5/32 of an inch, in which I have often seen the bees fast by the top of the head and the tip of the mandibles, which appears to be a little greater in length than the diameter of the thorax. And, as if by instinct, they know that if their heads can pass an opening their bodies can, also; so they have a habit of bobbing their heads through a suspicious opening. If no obstruction is encountered, they then pass readily.

It will be seen, then, how easy it is, in making the perforations queen-excluding, to make them too small, so as to be more or less obstructive, and how necessary it is that every perforation should be exact. No one who has not had experience knows how difficult it is to make dies out of tempered steel and get them exactly right. I have spent days in tempering, refitting, and tempering again, to get them right. For this reason I will not use a machine that makes more than one perforation at a time, as it is impossible to make perfect and uniform work on a machine that makes many perforations at once; so our machines must run very fast. One machine runs 200 a minute, and great skill is required to operate it.

Now, a word to Dr. Miller, and others inquiring if more than one size of perforations in our queen-excluding zinc is necessary: I will say that they are not, but in making a perforation that is fully practicable for the worker-bees (and none other should be thought of) it will be found that very small queens—little if any larger than the workers—will occasionally pass it. But such queens are rare, even among virgin queens, so that the zinc which I use is fully practicable as a queen-excluder, for either virgin or laying queens. I have had virgin queens above my queen-excluders for days at a time, trying continually to get through, without success, and undoubtedly trying every one of the perforations, so that if there had been one just a little too large, they would have surely found it, and this shows the necessity of uniformity.

No bee-keeper using perforated zinc for queen-excluding should rear queens from larva, and here I must enter a protest against queen-breeders who offer for sale queens whose places are supplied by queens reared invariably from larva too old to develop perfect, fully-developed and hence prolific queens. Such queens may be known by the smallness of the thorax, and may be expected to pass a reliable, queen-excluding zinc occasionally.

The queen-breeders referred to have a good many colonies, and all they do is to take out queens and let the colonies rear more. No good queens can be reared in this way, and bee-periodicals and apiarists should alike frown down these men.

No queen, virgin or laying, that was properly reared from the egg, can pass my zinc. At least in five years of extensive experience in the use of queen-excluders, queen-traps, etc., I have never known one to get through it, nor have I ever heard that any one else among the hundreds that have used it, have had a fully-developed virgin queen to get through it, which is evidence conclusive that perforated zinc can be made practically queen-excluding, and yet not be obstructive to worker-bees.

A perforated zinc can also be made that will exclude drones and allow the passage of the queens, but I do not know if such zinc can be made use of to any great extent. Time will determine.

New Philadelphia, Ohio.

Advantages of an Outside Case.

E. L. PRATT.

Double-walled hives are often confused with chaff hives. There may be advantages in chaff hives when properly constructed, but the double-walled hives can be worked to such better advantage that they are much more desirable. Chaff hives are generally made of heavy lumber, and, being permanently packed with absorbing material, are very clumsy to manipulated, and awkward things to move about. Then the packing is liable to become damp and sour, which is one of the worst things about a chaff hive. With the outside case very thin material can be used in both walls, which is a great saving in lumber and freight, besides rendering the hives easy of manipulation and safety in Winter.

The secret of successful out-door wintering is to rid the cluster of the moisture as soon as thrown off from the bees. Bees will stand any amount of cold if they can be kept dry and sweet. Diarrhea is largely due to moisture gathering closely about the cluster during long cold spells. When the temperature moderates, or the bees move to take food, this water is licked up by the bees, and by over-loading their stomachs with this foul condensed breath the bees contract what is termed bee-diarrhea.

Moisture will always collect on the coldest wall inside. When chaff is used between the two walls it, of course, becomes damp on the outside by absorption, and the dampness will gradually work its way through until the packing is thoroughly saturated, when it will become very cold and frosty. With thin hives and thin outside cases, the moisture is at once taken away from the bees and condensed on the inside walls of the outside case. When the sun strikes the hives it will warm up the outside cases, and the frost collected in the cases will melt, run down the sides and out of the hive.

By using cushions stuffed with chopped hay or straw over the frames, a double hive can be kept as dry and clean as they are at any time during the Summer. This condition is very necessary to winter bees successfully.

Another valuable feature about an outside case, is the ease with which colonies can be built up in Spring, especially when closed-end frames are used inside the winter case.

The cases work in well when feeding in early Spring or during the Summer and Fall, and there is no need of shade-boards when the outside cases are used.

In the production of comb-honey, the cases are a great aid, and the supers are always comfortable for the bees to work in, and if cold nights come on during gathering time the bees are not driven from the supers.

There are many other minor points of advantage about the outside cases, and Southern as well as Northern bee-keepers can use them to good profit. The time is close at hand when ⅞-inch stock will be superseded by ⅜ stock in the manufacture of bee-hives.

A perfect bee-hive should be cheap, light in weight, and durable, easy of manipulation, and should hold movable frames of standard Langstroth size. It should not be too large nor too small, but of a size best adapted for securing all of the honey in neat, salable shape.

For either comb or extracted-honey, the 8-frame size is about right, though we have been very successful with seven

Langstroth frames to the hive. It is natural for bees to store honey over the brood, therefore all honey receptacles should be adjustable to the top, and directly over the frames, so arranged that two or more can be tiered up, according to the amount of honey being gathered.

The standard section is of one piece, and 4¼ inches square. Any other size is a drug on the market in the majority of cases. The sections should be so arranged as to be interchangeable, either singly or in rows, as many times bees are loath to work in the outside sections, or those coming close to the ends. By jumping the unfilled sections to the center all are worked out at once, allowing us to remove the honey in cases rather than by the single section.

If the hive sets perfectly level from side to side, and wide sections are used, separators are not really necessary. But hives are apt to settle, or we may wish to use narrow sections. Separators afford the safest method of securing perfectly flat combs inside each section so necessary in shipment to distant markets, or the carting about in a retail trade. Tin, glass, wire and such materials are nuisances about any hive.

There should be some simple means of clamping the sections tightly together to avoid the deposit of large quantities of glue. By compressing the sections there are no cracks for the bees to stop, and we do not need to spend valuable time in scraping off an unnecessary deposit of useless matter. The cover should be a simple, flat, well cleated board of light weight, and should be kept well painted. All the joints should be square.

By using top-bars of good width and thickness, there is no need of honey-boards, unless they are queen-excluding, and for a queen-excluder there is nothing so good as a solid sheet of metal, well bound.

Here in New England a hive is not fit to winter out-of-doors unless it has an outside or winter case, to admit of packing with some absorbent material, such as cut hay, straw or chaff. A good sized cusion should be made of this material, to spread over the frames and entirely cover the top of the hive. There should be no packing at the sides until breeding commences in the Spring, as the heat is not sufficient to throw off the moisture until then.

Ventilating holes should be provided at the ends of the winter case, near the the top, to carry off all the moisture as fast as taken from the cluster. In this lies the secret of successful out-door wintering of bees. Over all comes a tight, well-painted winter roof, which can be screwed down and left until the flowers bloom in the Spring. There should be but one entrance, and that low down, so that the bees enter under the combs. Three-cornered blocks for contracting the entrance, have never been improved upon.

There are several minor points that are necessary to a perfect bee-hive. The space under the frames should be one-half of an inch, and those at the ends of the hanging frames are three-sixteenths —not over one-quarter. One-fourth inch scant is considered to be the correct space between the top-bars and the sections, to avoid the deposit of burr combs. Brood-combs spaced 1⅜ inches from center to center, will do away with all brace combs. If closed-end frames are used, they should be compressed the same as the sections, to avoid glueing.

If you decide to change from hanging-frame to closed-end, a new set of brood-frames is all that is necessary. If you think you will have better success in wintering in a double hive, an outside case can be added for a small amount.

Beverly, Mass.

Convention Notices.

☞ The eighth semi-annual meeting and basket picnic of the Progressive Bee-Keepers' Association, will be held on Thursday, May 7, 1891, at A. H. Williams' Hall, Chagrin Falls, Ohio. Those interested in bees and honey are cordially invited.
MISS ANN DUTTON, Sec., So. Newbury, Ohio.

☞ The bee-keepers of Western Connecticut who are interested in forming a Bee-Keepers' Association, are requested to meet at Mr. Edwin E. Smith's, in Watertown, Conn., May 13, as early in the day as possible. A good time is expected.
EDWIN E. SMITH.
EDWARD S. ANDRUS.

☞ The Ionia Bee-Keepers' Convention, will meet at Ionia (Mich.) May 6, 1891. It is intended by the management to have a Fair in connection with it. W. Z. Hutchinson, of Flint, Mich., editor of the "Bee-Keepers' Review," will deliver an address. He is one of the leading bee-masters of the United States. You cannot afford to miss his address. Come, and bring your wife with you. Get your neighbors to come. Will you please bring with you samples of hive and frame, super and sections, and samples of honey and mode of putting up, etc., and let us have an exhibition of our own.
HARM. SMITH, Sec., Ionia, Mich.

☞ The 8th semi-annual meeting of the Susquehanna County Bee-Keepers' Association will be held at Montrose, Pa., on Thursday, May 7, 1891.
H. M. SEELEY, Sec., Harford, Pa.

☞ The Central Michigan Bee-Keepers' Convention will be held at Pioneer Room, at the Capitol, Lansing, Mich., on Wednesday, May 6. A cordial invitation is extended to all.
W. A. BARNES, Sec., Lansing, Mich.

☞ The Des Moines County (Iowa) Bee-Keepers' Association, will meet at the Court House in Burlington, Iowa, on Tuesday, June 2, 1891, at 10 a.m. It is intended to organize a Southeastern Iowa Association. All interested in bees and honey are cordially invited to attend.
JOHN NAU, Sec., Middletown, Iowa.
GEO. BISCHOFF, Pres., Burlington, Iowa.

CONVENTION DIRECTORY.

Time and place of meeting.

1891.
May 6.—Ionia, at Ionia, Mich.
Harm. Smith, Sec., Ionia, Mich.

May 6.—Central Michigan, at Lansing, Mich.
W. A. Barnes, Sec., Lansing, Mich.

May 6.—Bee-Keepers' Ass'n and Fair, at Ionia, Mich.
Open to all. Harmon Smith, Sec., Ionia, Mich.

May 7.—Progressive, at Chagrin Falls, Ohio.
Miss Ann Dutton, Sec., So. Newbury, Ohio.

May 7.—Susquehanna County, at Montrose, Pa.
H. M. Seeley, Sec., Harford, Pa.

May 13.—Western Connecticut, at Watertown, Conn.
Edward S. Andrus, Torrington, Conn.

June 2.—Des Moines County, at Burlington, Iowa.
John Nau, Sec., Middletown, Iowa.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—The Editor.

North American Bee-Keepers' Association

President—P. H. Elwood....Starkville, N. Y.
Secretary—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

President—James Heddon ..Dowagiac, Mich.
Sec'y and Manager—T. G. Newman, Chicago.

Bee and Honey Gossip.

Bright Prospects.

I have never seen a better prospect for a good honey crop than at present. White clover is looking fine, and is more abundant than ever before. The Winter has not been severe enough to injure the basswood, or white or sweet clover. These give us our principal crop of honey. Bees have wintered well in this part of the State. I put 53 colonies, packed in chaff hives, into winter quarters, and have not lost a single colony or queen. Milo George.

Bowling Green, O., April 21, 1891.

Lost all Their Bees.

Last Summer was the poorest season that I ever saw for honey, the bees barely gathering enough to live on, and mine would have starved had I not sown buckwheat for them, but from the buckwheat they secured considerable honey, and out of the 45 colonies which I put into winter quarters on Nov. 1, I now have 22 good colonies, and the bees were never in better condition at this time of year—they are just booming. In this locality many lost all their bees, some lost half of their colonies, and a few suffered no loss at all. Last year the County Board ordered all bees assessed. Some assessors listed them, and some did not, and as the bee-keepers protested against the assessment, the board concluded not to assess the bees this year. If the weather continues favorable, I think bees will begin to swarm about the middle of May.

O. P. Miller.

Glendon, Iowa, April 24, 1891.

Prospects Were Never Better.

Bees in this section of the State that went into winter quarters with plenty of stores, are in excellent condition, and the prospects for a good honey crop the coming season were never better at this time of year in Kansas. With a good season and strong colonies, bee-keepers must surely secure a fine harvest.

O. A. Geeseka.

Wellsville, Kans., April 23, 1891.

Heavy Loss of Bees.

Last Fall I prepared 22 colonies of bees for wintering on the summer stands, by packing them in winter cases, using shavings for packing. I fed them with sugar syrup, as the Fall was a very poor one, and they were all short of stores. All but one colony came through the Winter in good condition, but that colony was so weak that I united it with another colony, and now have 21 strong colonies of bees. Among my neighbors who keep bees in box-hives, and do not feed them, 90 per cent. have died.

J. P. Smith.

Sunapee, N. H., April 29, 1891.

Loss by Starvation.

About nine-tenths of the bees in this vicinity have died during the Winter and Spring. Last season was a very poor one for honey, and, the Winter being an open one, most of the bees were left on the summer stands, with no protection. As they were poorly supplied with stores, nearly all of them starved. Being so busy with my farm work, I neglected my bees somewhat, and my own loss was heavy. C. A. Wright.

Little Prairie Ronde, Mich.

Wavelets of News.

More Sugar for the Money.

I had occasion to buy a barrel of sugar for feeding bees recently, and intended to buy A sugar. The wholesaler asked for what purpose I wanted it, and, after saying for feeding bees, he said I wanted granulated, as there was more sugar for the money. Their sales of sugar, as he showed me by their books, run five barrels of granulated to one of all other kinds. Granulated is 6 per cent. water, A 19 per cent. I write this as I was intending to try A sugar, as you sometimes use it. It is an easy matter to figure out the cost of *sweet* by using the percentage given.—F. A. SALISBURY, in *Gleanings.*

◆

Destruction of Clipped Queens.

Some say they lose so many queens if they clip their wings. One reason, I think, is because the scissors were not strictly clean, and had been used for other purposes, and so left a scent on the queen, as bees have a very keen smell; or the fingers were not perfectly clean, or the wing was cut too close, or she was clipped during a honey dearth, when bees are cross. I believe that bees, oftener than we think, kill or ball their queen when handled in a honey dearth (even when the queen is not touched), early in the Spring especially.—MRS. L. C. AXTELL, in *Gleanings.*

◆

Proper Time to Spray Trees.

May is the month in which we do the most of our spraying.

The first thing to learn is the habits of the insects we wish to destroy. Apple trees are sprayed to destroy the larva of the coddling moth. The moth deposits her eggs in the calyx of the apple, or blossom, from about the falling of bloom until 10 or 15 days after. The larva hatches in a few days, according to the temperature; and, if not killed, it begins to eat its way into the fruit.

About three or five days after blossoms fall is the best time to spray, and continue so doing for about 20 days, as often as rain washes off the poison. If, after the first spraying, it should not rain for a week or ten days, you will kill 75 per cent. of the larvæ.

The curculio does not attack the plum until the fruit is about the size of peas, which, in ordinary weather, is a week or ten days after the blossoms fall.

Spray plums the same as apples, viz.: with paris green, at the rate of one pound to 200 gallons of water, applied with a good spraying-pump. Some use the same proportion of london purple on apples; but it should be avoided on all *stone fruits*, as it is liable to injure the foliage.

You will see by the above that it is time and material thrown away to spray trees while in bloom; for, nine times out of ten, the rain will wash away the poison before the larva is on hand to eat it.—G. H. ASHBY, in *Gleanings.*

◆

Forcing Increase.

A simple and safe method for forming new colonies is to go to a strong one and take from it two frames of capped brood and place them, bees and all, in a new hive. From another colony fully as strong, borrow two frames of hatching brood, and place one on each side of those in the new hive. In both cases be careful not to take the old queen.

Move one of the strong colonies to a new stand, and set the new hive in its place.

Should more bees leave the colony that was moved than enough to cover the four combs in the new hive, their positions should be reversed until the desired force is in each hive.

At the end of the third day introduce a young laying queen.

Empty combs or full sheets of foundation should be placed at the side of those occupied as soon as the colonies become strong. The spaces left in the hives from which the brood was taken, can be filled in the same manner.

Never attempt to force increase unless honey is coming in freely. A comb of honey should be given to the forced colony if the flow should happen to shut down.—E. L. PRATT, in the *Apiculturist.*

◆

Excellence is Cheapness.

I have felt, and still feel, that this cheap queen traffic tends to haste, not care, in breeding, and that with "dollar queens" ruling in the market, there is lack of inducement for the careful, painstaking labor that is absolutely requisite to give us the best race of bees.

I have feared that this "cheap queen' traffic would crush the hard effort, requiring study, time, money, and the most cautious experiment and observation necessary to give us a very superior race of bees. There is reason to hope now that it will, at most, only delay it. Enterprising apiarists see in this the greatest promise for improved apiculture, and are already moving forward. Enterprising bee-keepers will purchase and pay well for the bee of the future that gives such evidence of superior excellence.

One thing is certain: "dollar queens" are in the market, and are in demand; so whether the business tends to our good or evil, as rational men we must accept the situation, and make the most of things as they exist.

Let me urge, however, upon the progressive apiarist that there is no possible doubt but that the bees of the future will be immensely superior to those of to-day.

Man can and will advance here, as he has in breeding all other stock. If the obstacles in the way are greater, because of the peculiar natural history of the bee, then the triumph, when it comes, will be greater, and the success more praiseworthy.—PROF. A. J. COOK, in the *Apiculturist.*

New Variety of Bees.

In the *Canadian Bee Journal*, "A Hallamshire Bee-Keeper" describes a new variety of bees—the Punic—*Apis Niger.* This variety is from Africa, is very difficult to obtain, but, according to this "Hallamshire Bee-Keeper," who has tried it, no other bee is its equal. He is going into the business of importing them, but the price will be high at first —$40 for an imported queen.—*Review.*

Neatness in the Apiary.

Cheapness in hives is desirable, so it would be in building a house; but cheapness is not the only feature to be taken into consideration. Convenience, durability and beauty must be combined with cheapness. Hives made of poor lumber, poorly put together, and unpainted, will never be satisfactory to the enterprising apiarist. Old hives should be repaired and painted, and new ones procured if necessary before the active work of the season begins. You can identify a successful bee-keeper by looking at his apiary, just the same as you can tell a good house-keeper by looking through her house.

Show me an apiary that has neat, well-painted hives and clean grounds, and I will show you an apiarist who is successful; but let me see broken, unrepaired, unpainted hives, and a trashy ground, and I will show a bee-keeper who says "there is nothing in bees." The bee-keeper can find no better example than by looking inside his bee-hives. Try to keep the outside of your hive as neat in appearance as the inside. —WALTER S. POUDER, in the *Indiana Farmer.*

HONEY AND BEESWAX MARKET.

DETROIT, April 25.—Good comb-honey getting scarce, and selling at 14@15c. There is some dark and dirty looking in the commission houses, but it is very slow sale, and at the buyers' own prices. Extracted, 8@9c. Beeswax firm, at 28@30c.
M. H. HUNT, Bell Branch, Mich.

NEW YORK, April 24.—Market is bare of comb-honey. We quote: Extracted, buckwheat, 7@7½c; California, in good demand, at 7@7½c, and market well supplied; Southern, none in market. Beeswax, scarce at 27@29c.
HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

KANSAS CITY, April 25.—Market continues about the same; stocks becoming light. We quote: White 1-lb. comb, at 16@18c; dark, 10@12c; California white, 2-lb.,12@15c; extracted, 6@7c. No Beeswax in the market.
CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CINCINNATI, April 25.—There is a good demand for both comb and extracted honey, with fair supply. Comb-honey, 14@16c for choice, in a jobbing way; extracted, 6@8c. Beeswax is in good demand at 25@30c for good to choice yellow.
C. F. MUTH & SON,
Corner Freeman & Central Aves.

CHICAGO, April 26.—Demand for both comb and extracted honey increasing, and our stock is light. Can use shipments to advantage. 1-lb. sections, 16@18c; 2-lbs., 14@15c; extracted, 7@8c. Beeswax, 30c.
S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, April 25.—Fancy white 1-lb. comb, 18c; fair to good, 17c; dark 1-lb., 14@15c; 2-lb. white comb, 15@16c; 2-lb. dark, 13@14c; extracted, white, 7c; dark, 5@6c.
HAMBLIN & BEARSS, 514 Walnut St.

CHICAGO, April 26.—There is the usual Spring demand for honey, and best white continues to bring 17@18c; honey that is off in color and condition sells for 2@3c less; very little call for dark comb. Extracted, is selling at 7@8c, in cans or barrels. Beeswax, 27@28c.
R. A. BURNETT, 161 S. Water St.

BOSTON, April 24.—Honey is in fair demand; supply short. White 1-lb. comb is very scarce and wanted, at 18@20c; fair to good, 18@19c; 2-lb. sections, 16@17c. Extracted, 8@9c. Beeswax, 30c.
BLAKE & RIPLEY, 57 Chatham Street.

ALBANY, N. Y., April 24.—Honey market is slow, with small stocks of comb. We quote: clover, 1-lb. comb, at 15@16c; buckwheat, 12@13c. Extracted, light, slow at 7@8c; dark, firm at 6@7c. Beeswax, 25@27c.
H. R. WRIGHT, 326-328 Broadway.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

ADVERTISING RATES.

20 cents per line of Space, each insertion.

No Advertisement inserted for less than $1.00.

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ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

☞ Subscribers who do not receive their papers promptly, should notify us at once.

☞ Send us *one new* subscription, with $1.00, and we will present you with a nice Pocket Dictionary.

☞ The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to pay for another year.

☞ Systematic work in the Apiary will pay. Use the Apiary Register. It costs:

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 25
" 200 colonies (420 pages)	1 50

☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

The Convention Hand-Book is very convenient at Bee-Conventions. It contains a simple Manual of Parliamentary Law and Rules of Order for Local Bee-Conventions; Constitution and By-Laws for a Local Society; Programme for a Convention, with Subjects for Discussion. In addition to this, there are about 50 blank pages, to make notes upon, or to write out questions, as they may come to mind. They are nicely bound in cloth, and are of the right size for the pocket. We will present a copy for one new subscription to the BEE JOURNAL (with $1.00 to pay for the same), or 2 subscribers to the HOME JOURNAL may be sent instead of one for the BEE JOURNAL.

◆

The "Farm Poultry" is a 20-page monthly, published in Boston, at 50 cents per year. It is issued with a colored cover and is finely illustrated throughout.

We have arranged to club the AMERICAN BEE JOURNAL with the *Farm-Poultry* at $1.35 per year for the two. Or with the ILLUSTRATED HOME JOURNAL at $1.75.

◆

If you have a desire to know how to have Queens fertilized in upper stories, while the old Queen is still laying below—how you may *safely introduce* any Queen, at any time of the year when bees can fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact, everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and is as interesting as a story. Price, $1.00. For sale at this office.

◆

When talking about Bees to your friend or neighbor, you will oblige us by commending the BEE JOURNAL to him, and taking his subscription to send with your renewal. For this work we will present you with a copy of the Convention Hand-Book, by mail, postpaid. It sells at 50 cents.

◆

Calvert's No. 1 Phenol, mentioned in Cheshire's Pamphlet on pages 16 and 17, as a cure for foul-brood, can be procured at this office at 25 cents per ounce, by express.

☞ **Jacob T. Timpe,** of Grand Ledge, Mich., offers to give away 50 Tested Queens, of his five-banded Italians, to purchasers of his New Potatoes, which have been advertised in the BEE JOURNAL. Do not fail to read his advertisement on page 587. He refers you to his postmaster, as to his responsibility.

◆

Supply Dealers desiring to sell our book, "Bees and Honey," should write for terms.

◆

A Nice Pocket Dictionary will be given as a premium for only **one new** subscriber to this JOURNAL, with $1.00. It is a splendid little Dictionary—just right for the pocket. Price, **25 cents.**

◆

Binders made especially for the BEE JOURNAL for 1891 are now ready for delivery, at 50 cents each, including postage. Be sure to use a Binder to keep your numbers of 1890 for reference. Binders for 1890 only cost 60 cents, and it will pay you to use them, if you do not get the volumes otherwise bound.

◆

Supply Dealers should write to us for wholesale terms and cut for Hastings' Perfection Feeders.

Wants or Exchanges.

Under this heading, Notices of 5 lines, or less, will be inserted at **10 cents per line,** for each insertion, when specially ordered into this Department. If over 5 lines, the additional lines will cost 20 cents each.

WANTED—A steady, sober and industrious young man for general farm work, all the year round, at $30.00 per month and board; or a young couple at $45.00 per month and board. Correspondence invited with anyone desiring to come to California, to make it their home.
F. M. HART,
18A1t Travers, Tulare Co., Calif.

FOR SALE—A limited number of light Brahma Eggs, from choice pure-bred stock. Only prime, fresh Eggs sent; 13 Eggs, $1.00.
18A1t A. P. WYLIE, Prairie Centre, Ills.

WANTED—To place in the hands of every wide-awake bee-keeper, my Catalogue. Write me AT ONCE for one and see how cheap I can sell you Hives, Sections and other Supplies.
17A2t HENRY STEWART, Prophetstown, Ill.

Bee Hives, Sections, Etc.

BEST of goods at lowest prices. We make **15,000** Sections per hour. Can fill orders promptly. Write for free, **ILLUSTRATED CATALOGUE.**

G. B. LEWIS CO.,
35Atf WATERTOWN, WIS.

Mention the American Bee Journal.

DETECTIVE We want a Man in every locality to act as **Private Detective** under our instructions. Send stamp for particulars.
WASHINGTON DETECTIVE AGENCY,
18A13t Box 787, Washington, Iowa.

Mention the American Bee Journal.

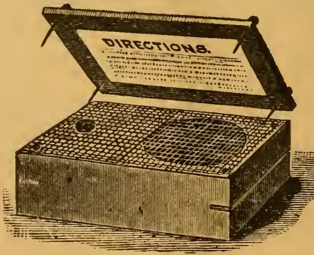
PENSIONS

THE DISABILITY BILL IS A LAW.

Soldiers Disabled Since the War are Entitled. Dependent widows and parents now dependent whose sons died from effects of army service are included. If you wish your claim speedily and successfully prosecuted, address

JAMES TANNER,
Late Commissioner of Pensions, **Washington, D. C.**
18A1t

Mention the American Bee Journal.



Price for	1	10	100
Complete	5c.	45c.	$4.00
Complete except candy,	5c.	40c.	3.50

Postage 1c each

FOR MAILING AND INTRODUCING,

The Dixie Queen-Cage

is safe, simple, neat and cheap. Your address printed on 100 or more, free. Printed directions with all. Try it.

JENKINS & PARKER, Wetumpka, Ala.
18A1t

Mention the American Bee Journal.

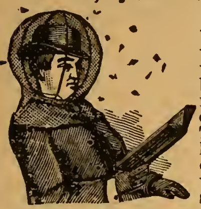
Full Colonies of Italian Bees $4.00; two-frame Nuclei, $1.50; three-frame, $2.00. Bees per pound, $1.00.
H. L. PANGBORN,
18A2t MAQUOKETA, IOWA.

ITALIAN AND ALBINO QUEENS at the lowest prices.
Address R. H. SCHMIDT, New London, Wis.
17A13t

FREE HOMES At the rate they have been going the Public Domains will all be gone in 5 years. Now is the time to secure as Rich Land as the Sun shines on at **$1.25 per acre.** What better could be left for Children? Where these Lands are; how to get them, as well as for information of all States and Territories, send **10 cents** and receive the beautiful Engravings, a Picturesque Panorama of the United States. Address **THE WESTERN WORLD, Chicago, Ill.**

The "Globe" Bee Veil

Price, by Mail or Express, $1.00.



There are five cross-bars united by a rivet through their center at the top. These bars are buttoned to studs on the neck-band. The bars are of best light spring steel. The neck-band is of best hard spring brass. The cover is of white bobinet with black face-piece to see through.

It is very easily put together; no trouble to put on or take off; and folds compactly in a paper box 6x7 inches, by one inch deep. The protection against bees is perfect—the weight of the entire Veil being only five ounces.

Extra Nets, 25 cents each.

CLUBBING OFFER.

We will send this Veil and the Bee Journal one year for **$1.75.** Or, we will give the Veil **Free** for three (3) **New** Subscribers to the Bee Journal, with $3.00 to pay for them.

Subscriptions to the Home Journal may be included in all Clubs, counting two (2) Home Journals as equal to one (1) Bee Journal.

THOS. G. NEWMAN & SON,
246 East Madison Street CHICAGO, ILL.

Bee-Hives, Sections, &c.

On and after Feb. 1, 1890, we will sell our No. 1 V-groove Sections in lots of 500 as follows: Less than 2,000 at $3.50 per thousand; 2,000 to 5,000 at $3.00 per thousand. Write for special prices on larger quantities. No. 2 Sections $2.00 per thousand. Send for Price-List for other Supplies. Address,

J. STAUFFER & SONS,
(Successors to B. J. Miller & Co.)
31Atf NAPPANEE, IND.

Mention the American Bee Journal

1891. IF YOU WANT 1891.

BEE-SUPPLIES.

Send for my Illustrated Price-List. **Quinby Smokers** a specialty; all sizes kept in stock; also all kinds of Foundation. Dealers should send for wholesale list of Smokers.

W. E. CLARK,
8A24t ORISKANY, Oneida County, N. Y.

Mention the American Bee Journal.

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A **PAMPHLET,** treating of the taming and handling of bees. Just the thing for beginners. It is a chapter from **"The Hive and Honey-Bee, revised."** Price, **8 cts.** Advice to beginners, Circulars, &c., free.

CHAS. DADANT & SON,
1Atf Hamilton, Hancock Co., Ills.

Mention the American Bee Journal.

YOU WILL BE

TOO LATE

If you don't send in your order at once for some of my New Potatoes. See my ads. on pages 404 and 524, of the BEE JOURNAL.

50 Tested Queens to be Given Away!

Do you want one? If so, turn to the pages referred to, and **Send in your Order before May 1.** After that none will be given away. Letters postmarked May 1, will yet compete. **After that Date,** all not taken **will be withdrawn.** These Queens are worth $2.00 each, and all are bred from my **best stock of the** Five-Banded Italians! **Lose no time, but send in your order to-day.** JACOB T. TIMPE, Drawer 90, Grand Ledge, Mich.
17A2t

Mention the American Bee Journal.

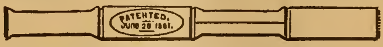
Attention, Bee-Keepers!

Nice White, V-groove one-piece **Sections,** only $3 per thousand. Tested Italian Queens, in May, $1.50. Three-frame Nuclei, with tested Queen, $3.50. Bee-Hives and other Supplies very low. Price-List free.
J. M. KINZIE, Rochester, Oakland Co., Mich.
17Atf

J. FORNCROOK & CO.,

MANUFACTURERS OF THE

"BOSS" ONE-PIECE SECTIONS,



WILL furnish you, the coming season, ONE PIECE SECTIONS, sand-papered on both sides—as cheap as the cheapest, and better than the best.
☞ Write for prices.
Watertown, Wis., Dec. 1, 1890. 17A10t

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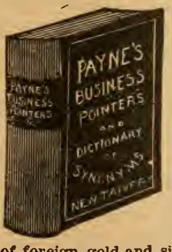
"A Mine of Knowledge."

PAYNE'S BUSINESS POINTERS. A handy Encyclopedia of information necessary to business success. Comprising New Tariff complete, Population of U. S. 1890. Passport regulations. Rates of foreign postage. Naturalization laws. How to indorse checks. Debt of U. S. Wages table. Interest laws of U. S. Interest tables—5, 6, 7, 8 and 10 per ct. Table of compound interest. Table of weights and measures. List of abbreviations. Marks and rules of punctuation and accent. DICTIONARY OF SYNONYMS. Patent law. Legal forms used in business, private marks of prices. How to measure land. Rates of postage in U. S. American value of foreign gold and silver coins. Copyright law U. S. Latin, French, Spanish and Italian words and phrases. Use of capital letters, etc., etc. 225 pages, bound in leatherette cover. Price **25 cts.** Extra cloth cover. **Price 50 Cents.**


PAYNE'S BUSINESS POINTERS AND DICTIONARY OF SYNONYMS NEW TARIFF
PAYNE'S BUSINESS POINTERS

This book will be mailed on receipt of price. We will send it in Leatherette Binding, as a Premium for **1** new subscriber, or in Cloth Binding for **2** new subscribers to this Journal.

THOS. G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL
17A—5Mtf

PAYNES LEGAL ADVISER
PAYNES LEGAL ADVISER

"Know the law and avoid litigation!"

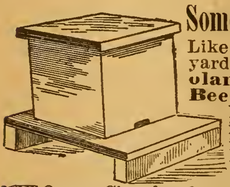
Payne's Legal Adviser—Is a new epitome of the Laws of the different States of our Union and those of the General Government of the United States, and will be found invaluable to those who are forced to appeal to the law, as well as to that large class who wish to avoid it. The whole is alphabetically arranged so as to make reference to it easy. This work also contains legal forms of Deeds, Mortgages, Contracts, Assignments, Power of Attorney, Acknowledgements, Builders' Contracts, Bills of Lading, Bills of Exchange, Affidavits, Certificate of Incorporation, Form of Release, For Sale Contracts, Responsibilities of Common Carriers, Proofs of Loss, Leases, Assignment of Lease, Articles of Partnership, Notice of Dissolution. Deed of Trust, Bill of Sale, Wills, etc., etc. Large 12mo, cloth, 300 pages. Price, **$1.50.**

This book will be mailed on receipt of price. We also offer it as a Premium on 6 new subsubscribers to this Journal. If this Premium is desired on a smaller number of subscription, the cash can be remitted—pro-rata to cover the deficiency.

THOS. G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.
17A—5Mtf

Voice of Masonry and Family Magazine.

Three years' a Paper and twenty-five a Magazine. Now unexcelled. Contains fine Portraits and Illustrations, and a great variety of articles, stories and poems for Freemasons and their families; also Eastern Star, Masonic Gleanings and Editorial Departments. Price per year, $3.00.
JOHN W. BROWN, Editor and Publisher,
182 & 184 S. Clark Street, Chicago, Illinois.



Some 400 Little Hives

Like this are used in our yards for rearing **Carniolan & Italian Queen Bees.** All Queens strictly pure and first-class in every respect. Satisfaction guaranteed —Safe arrival to all parts of Continent.
☞ Queen Circular free. E. L. PRATT, Pratt Bee-Farm, BEVERLY, MASS. 10Atf
WHEN ANSWERING THIS ADVERTISEMENT, MENTION THIS JOURNAL.

MUTH'S

HONEY EXTRACTOR
PERFECTION
Cold-Blast Smokers,
Square Glass Honey Jars, &c.

For Circulars, apply to CHAS. F. MUTH & SON, Cor. Freeman & Central Aves.. Cincinnati, O.
Send **10c** for Practical Hints to Bee-Keepers.
1Atf

BEESWAX WANTED.

Beeswax—We will pay **28 cents** per pound, in Cash, for Yellow Beeswax, delivered here.

☞ To avoid mistakes, the name of the shipper should always be on each package.

THOS. G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

You Can Save 20 Per Cent.

BY ORDERING YOUR SUPPLIES
—OF—
WM. BRIGHT, Mazeppa, Minn.

P. S.—We want to say confidentially that we are selling good **Bee-Hives** for 55 cts.; good **Brood-Frames,** $1 per 100. We have a large stock of **Smokers** we will sell at a bargain.
16A7t
Mention the American Bee Journal.

WOMAN'S WORK!

Literary Domestic
50 Cents a Year. Athens, Ga.

4 Trial Numbers,
With great premium offers, on receipt of **10 Cents** and addresses of **10 MARRIED LADIES.** Best monthly in the world, for the price. Address **WOMAN'S WORK, Athens, Georgia.**
7A12t
WHEN ANSWERING THIS ADVERTISEMENT, MENTION THIS JOURNAL.

ADVANCE IN PRICE
—OF—
COMB-FOUNDATION

On and after this day, the price of **COMB-FOUNDATION** is advanced

Three (3) cents per Pound

Both Wholesale and Retail,

on account of the scarcity and consequent enhanced value of Beeswax.

CHAS. DADANT & SON,
THOMAS G. NEWMAN & SON.
April 2, 1891.

AND DON'T YOU FORGET IT

I TELL you what, Jones, **Levering Bros.** sell the best goods and at the lowest price of any one I've struck yet. The largest and best equipped

Bee-Hive Factory

in the West. The new DOVETAILED HIVE A SPECIALTY. Everything used by practical bee-keepers, by wholesale and retail. Send for our 1891 Illustrated Price-List, and save money. Address
LEVERING BROS., Wiota, Cass County, Iowa.
6A26t
WHEN ANSWERING THIS ADVERTISEMENT, MENTION THIS JOURNAL.

HOLD ON! Don't order your Supplies before receiving my Price-List of everything in the Bee-Keepers' line, made by improved machinery. Early orders will be filled without delay. Imported and Home-bred Italian Queens a specialty, in their season. If you want an Imported Queen this season, let me hear from you soon. Satisfaction guaranteed with all my goods. Prices low as the lowest. Send your name on a Postal Card.
A. A. WEAVER, Warrensburg, Mo.
6A13t
WHEN ANSWERING THIS ADVERTISEMENT, MENTION THIS JOURNAL.

THE AMERICAN BEE JOURNAL
CIRCULATES
ALL OVER THE WORLD.
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVII. May 7, 1891. No. 19.

Editorial Buzzings.

So Bright the bud's unfolding leaves,
So tempting sweet the nectar-cup;
The fragrance that it softly breathes,
Invites the blithesome bee to sup.

◆

Mr. S. Corniel writes us that he has obtained some important facts with respect to spreading foul-brood by foundation, which he will communicate through the columns of the American Bee Journal at an early date.

◆

A Prediction concerning the honey crop from linden and white clover this year is on file in this office, and has been here for two months. The author of it feels sure he can tell it to a certainty six months in advance. We shall see; but it will take several years to prove it. "One swallow does not make Summer"—nor does one prediction and its fulfillment prove that its author can foretell the matter with certainty every year. In July we will refer to this prediction again.

Our Friend, the Hon. Joseph M. Hambaugh, and his co-laborers in the Legislature at Springfield, Ills., have carried every bill successfully through the committee rooms, which pertain to the pursuit of apiculture.

There is no doubt but that we shall get an allotment on the appropriation for the Columbian Exhibit, but the amount is not yet known. The matter is in the hands of the Committee on the World's Fair.

There is nothing like having faithful friends in the Legislative halls. We owe them a hearty vote of thanks for their vigorous assistance, no matter whether the bills pass or not, but we fully expect them to become State laws.

◆

The Nebraska State Millers held their annual convention in Omaha on May 1. From reports of committees appointed early in the season to investigate crop conditions, it is announced that there is sufficient grain in the State to last until harvest; that the crops are in excellent condition, and promise the largest yield in the State's history, and that the reports of wheat in Kansas being damaged by rust and insects are untrue. If the crops are good, the bees usually do well. Bee-keepers may therefore confidently expect a good crop of honey.

◆

When J. B. Mason left Mechanic Falls, Me., on Dec. 22, he allured away a neighbor's wife, Mrs. Cotton. They went to Los Angeles, Calif., and a letter from her appears in last week's Boston *Herald*, appealing to her husband for forgiveness, saying that she neither expected nor deserved his love. Mrs. Mason and the forsaken family have appealed to the courts to dispose of the property left by the dishonorable husband and father. He was editor of the *Bee-Keepers' Advance*, but it did not "advance" in his hands. He dragged it down to death.

Illinois Bee-Keepers have now a duty to perform *at once.* The bill before the Legislature appropriating $500 to defray the expense of publishing the Annual Reports will receive some antagonism from a few members, unless pressure is brought to bear by their constituents.

In order to restrain their opposition, we earnestly request the bee-keepers in the nine districts named below, to *immediately* write to their members, requesting them to favor the measure, and also to obtain the endorsement of other influential citizens, and send such to them.

That every one may know whom to address, we will here give the names of the members whose endorsement we need, noting their Counties and Districts. Here they are:

James Cockrell, Kinmundy, Marion County, 43d District.
Geo. B. Parsons, Shawneetown, Gallatin County, 49th District.
James P. Wilson, Woosung, Ogle County, 10th District.
Eli Dixon, Roseville, Warren County, 27th District.
Chas. V. Chandler, Macomb, McDonough County, 27th District.
David C. Enslow, Carlinville, Macoupin County, 38th District.
Edward Merritt, Springfield, Sangamon County, 39th District.
Fred Wilkeson, Petersburg, Menard County, 34th District.
John Springer, Jacksonville, 38th District.

Fruit Bloom is here, but the weather, heretofore warm and sunny, is now cold and cloudy (as we write this on Monday morning). The cherry trees are in blossom, and the bees have been gathering nectar from them. Should the weather become pleasant for a few days, the bees will gather a generous supply of honey from the fruit bloom. They need it, and the trees are equally needful of their services in fructifying the bloom, and thereby to insure a generous quantity of fruit. We hope, therefore, to have many warm and pleasant days in this month.

Father Langstroth, in years now passed (and some few do it yet), was falsely charged with copying Debeauvoys, and other Europeans, rather than inventing the hive that has revolutionized bee-keeping the world over. The refutation repeatedly made had its effect, but the charge, and its oft reiteration in new fields, was very wearing upon the "grand old man." It has recently been again charged in Switzerland, but Father Dadant has given it a quietus in the *Revue Internationale.* It took four pages of vigorous arguments, but the work was nobly done.

Prof. A. J. Cook has just issued another edition of his "Bee-Keepers' Guide" (the 16th thousand). It contains 461 pages, and is nicely printed and bound, and the price is now reduced to one dollar. Such a full and complete work, at such a low price, should be a very popular one, and the sales should be very large. It is thoroughly scientific and practical, and fully abreast of the times, in our ever-advancing pursuit. For sale at this office.

Beginners are now to have a bee-periodical wholly devoted to their interests. The *American Bee-Keeper* announces, in its last issue, that it will hereafter be published "especially for the benefit of the beginners and the inexperienced." It says that such a paper "is most needed," and admits that the field for advanced bee-keepers is well occupied by the other bee-periodicals.

Rev. R. C. Bedford, a bee-keeper of Montgomery, Ala., preached in Clinton, Wis., on April 19, and the *Banner*, published at that place, gives the following as a news item:

> Upon examination of C. W. Dayton's queen-restrictor, Mr. Bedford was so well pleased with it that he took one with him to introduce into his Industrial Institute, at Tuskegee, Ala.

Glad Summer is Near.

The finches are singing,
The glad bees are humming,
The grasses are springing,
The Summer is coming,
For May is here,
With sunshine and shadow,
Refreshing and cheering.
How green is the meadow !
Where daisies appearing,
As stars, shine out clear.

The tree-tops are swaying,
With nests on their branches ;
The rabbits a-playing,
Or sit on their haunches,
As striving to hear
The church bells' far pealing,
Now swelling, now sinking,
Through the wood the stream stealing,
Seems joyously thinking
Glad Summer is near !

◆

The Season in England has not been as favorable since our last report, given on page 536. The *British Bee Journal* for April 9, thus describes the change :

> The genial warmth and bright sunshine which bees and men were so thoroughly enjoying when last we wrote in this column, was followed by some welcome rain, only to be succeeded by a return of cold northeast wind and more gloomy dullness. The present backward condition of the fruit bloom everywhere in the south makes it unsafe to hope for any very early honey from that important source of supply, but we have the comforting reflection that the tender blooms, so snugly folded away in the roundness of plump buds ready to burst forth, are safe from sharp frosts and drying east winds. Passing through some acres of fruit gardens daily, we can see abundance of promise for the bees ; but even the black-currant bloom is only just showing its tiny purple pellets half hidden between the opening leaves, while plums, which we thought to have seen white with blossom by this time, are still a thing of beauty which "is to come." We do not share the prognostications of a cold Summer some talk of one bit—at least, so far as that unhoped-for condition of things is to be associated with a poor honey harvest. All our experience points to the fact that very severe and long Winters have been followed by good bee-seasons, and we trust 1891 will be no exception.

◆

Price-Lists are received from Ed. E. Smith, Watertown, Conn., and O. H. Hyatt, Shenandoah, Iowa.

"The Wish is Father to the thought." This is manifestly true with respect to the coming honey crop. We wish for a good honey season, and often we are led to think that it will be so. But we cannot tell with certainty anything about it until it comes. There are many contingencies, but at present the prospect is good. We *hope* nothing will prevent its realization. This reminds us of a paragraph in *Gleanings* for April 15, which reads thus :

> Hope is the word engraven on the heart of every bee-keeper at the beginning of every season. "We are going to have a good season this year," and so preparations are made. Without hope or expectancy there would be no preparation, and consequently no honey crop. Without bees and proper appliances at the right time, a big honey-flow does not amount to much ; and so it behooves us to be ready for whatever may come.

◆

A Queen Restrictor is received for our Museum. On page 609 will be found an illustrated article descriptive of it and its uses when rearing Queens, while there is a laying Queen in the hive. When sending it, Mr. C. W. Dayton remarks as follows concerning it :

> After what has been said in regard to the Queen Restrictor in the bee-papers, I thought you might care for one to put in the AMERICAN BEE JOURNAL Museum for inquiring visitors.
>
> It is claimed, and it has proven to perform the function usually ascribed to reversion, contraction and exclusion, and preventing swarms by obviating the construction of queen-cells, by inversion every four days, which is as simple and easy as the reversion of a single reversible comb. It solidifies brood and honey, thereby saving labor in extracting. Drone-rearing in the honey-combs is avoided, which in its broadest sense is economy of hive combs ; admits the field-bees to the surplus apartment more readily than to the brood apartment, etc.
>
> C. W. DAYTON.

◆

Prof. Totten, of Yale University, in an editorial contribution to Frank Leslie's Illustrated Newspaper this week, predicts that the millennium will arrive early in 1899.

Invocation to Spring.

C. J. ROBINSON.

Come, O, Spring ! with skies of azure ;
Come, and bring us joy and pleasure !
Come, with bees through bright skies winging;
Come, with waters gaily singing !

Come, fair Spring, enrobed with flowers ;
Come, with earth-refreshing showers ;
Quickly come, for we are weary
Of old Winter, stern and dreary !

Come ! with thy soft lights and shadows,
Gliding o'er the bright green meadows ;
Come ! for young hearts full of lightness,
Dream of thy long days of brightness.

Come ! the brook would fain be dancing,
'Neath thy dewy eyes, clear glancing;
Hear it sighing for the flowers
And green leaves, to deck its bowers.

Come ! The forest old rejoices,
Lifting up its myriad voices ;
Like an anthem, rising, falling—
"Come, fair Spring ! O, come !" 'tis calling.

Come ! the merry bird with trilling
All the sunny air is filling !
Hum of bees is touched with sadness,
Till thou com'st with light and gladness.

Come ! we're sighing for thee daily,
Come ! and deck the old earth gaily ;
Chase away the heart's dull sadness,
With thy merry hum of gladness.
Richford, N. Y.

Winter Cases for hives have been endorsed quite freely of late, but they are not "a new idea." Henry Alley claims to have had a patent on them some 19 years ago, and has used them in the Bay State Apiary ever since that time. He says he is glad that Mother Earth did not claim him before some of his ideas in bee-culture were adopted. In this, Brother Alley is ahead of many worthy men, whose ideas were not put to practical use until they were dead.

An Eight-Frame Hive, very similar to the dovetailed hive, has been made by the Falconer Manfg. Co. The material of the sides is ⅜ of an inch thick, and the ends are made out of ⅞ inch lumber. Of course, an outer case must be used in Winter, if the bees are not housed.

Discouraging reports come from the East. Many bees are now starving, where not fed ; their meager stores of last Fall were gone before fruit bloom came to replenish them

Prof. A. J. Cook wrote us thus on April 30, 1891, giving us an indication of his views concerning the outlook —present and future :

DEAR FRIEND :—Our bees gave us quite an amount of autumn honey last Fall, and had enough for Winter. They wintered very well, both out-doors and in the cellar. The soft maples gave us three or four days, and the bees gathered much from them. Now they are at work on hard maples. The fruit bloom is close at hand. With good weather, we shall have another boom. White clover promises well, and with full colonies of bees, we may hope for an excellent year. A. J. COOK.

Friend.—A correspondent in the *Canadian Bee Journal* expresses his opinion of the use of this familiar term :

I do not like to be addressed as "friend" by a man I never saw. A community of sentiment on one particular subject does not warrant men in employing it when speaking of or to each other. Nobody uses it under such circumstances except American bee-keepers.

We fully concur in his opinion, and never use that term in addressing any but those whom we know to be friends.

Supply Dealers desiring to sell our book, "Bees and Honey," should write for terms.

Convention Notices.

☞ The eighth semi-annual meeting and basket picnic of the Progressive Bee-Keepers' Association, will be held on Thursday, May 7, 1891, at A. H. Williams' Hall, Chagrin Falls, Ohio. Those interested in bees and honey are cordially invited.
MISS ANN DUTTON, Sec., So. Newbury, Ohio.

☞ The 8th semi-annual meeting of the Susquehanna County Bee-Keepers' Association will be held at Montrose, Pa., on Thursday, May 7, 1891.
H. M. SEELEY, Sec., Harford, Pa.

☞ The bee-keepers of Western Connecticut who are interested in forming a Bee-Keepers' Association, are requested to meet at Mr. Edwin E. Smith's, in Watertown, Conn., May 13, as early in the day as possible. A good time is expected.
EDWIN E. SMITH.
EDWARD S. ANDRUS.

☞ The Des Moines County (Iowa) Bee-Keepers' Association, will meet at the Court House in Burlington, Iowa, on Tuesday, June 2, 1891, at 10 a.m. It is intended to organize a Southeastern Iowa Association. All interested in bees and honey are cordially invited to attend.
JOHN NAU, Sec., Middletown, Iowa.
GEO. BISCHOFF, Pres., Burlington, Iowa.

Queries and Replies.

Gloves for Handling Bees.

QUERY 765.—In working among bees, is protection for the hands desirable? If so, which is better, gloves or mittens? If gloves, what kind are best? If mittens, how should they be made, to give satisfaction?—Iowa.

No protection is needed.—R. L. TAYLOR.

No. Some use rubber gloves.—J. M. HAMBAUGH.

We would not advise using gloves.—DADANT & SON.

No, with a big N. "Cats with gloves on catch no mice."—JAMES HEDDON.

Not with me. I should say gloves, but have had no experience for years.—A. J. COOK.

When the bees are cross, yes. Gloves are preferable. I use leather ones.—M. MAHIN.

Decidedly, no. Neither gloves nor mittens are worth a cent in the apiary. —C. H. DIBBERN.

Sometimes. I like rubber gloves, with the ends of the thumbs and first fingers cut off, the best of anything I have tried. —A. B. MASON.

I prefer to use gloves, and use an Indian oil-tanned buckskin glove. Mittens are "no good"—you must have free use of fingers.—J. E. POND.

No. If gloves must be used, would recommend thick woolen ones, covered on the back of hand and fingers with muslin or home-spun.—J. P. H. BROWN.

It is very seldom I use gloves, but I find a pair of goat-skin gloves, costing 50 cents, a very useful article when taking bees from the cellar in Spring.—H. D. CUTTING.

Much depends on the bees you have. They must be very cross before I wear anything, and then I think I would use mittens of white cotton cloth, with a finger for the forefinger.—C. C. MILLER.

I do not use gloves, except in some cases when handling very spiteful bees. If you use gloves at all, they should be fingered gloves. Mittens would be useless because you could not "finger" anything with them. Handling frames, etc., is peculiarly a work of the fingers. In fact, I have never seen a pair of gloves that were not in the way when handling my hives and bees. Some bee-keepers pretend to have a contempt for gloves, but I have had spiteful hybrids to sting my hands and wrists in a way that would change the minds of any of the pretenders.—G. W. DEMAREE.

No. No man or woman can become a thorough, practical bee-keeper and wear mittens or gloves. Many have started out with gloves on, but if they were of the right material for a bee-keeper, they soon took them off.—G. M. DOOLITTLE.

You might use gloves until you get over your nervousness, when you will probably lay them aside. A light glove, of linen or cotton, covering the wrists well, with the fingers cut off at first joint, is my preference.—EUGENE SECOR.

With most people, yes. Buckskin gloves give us very good satisfaction, with cloth gauntlets attached, to come well up the arm. Mittens made of brown linen, are very good, and the material is, perhaps, the least objectionable to the bees of any.—MRS. L. HARRISON.

Protection for the hands is not needed in working with any kind of bees, though I want a bee-veil over the face. I never fool with ugly bees. If they show up vicious, I give them tobacco smoke without scruple, and so often save trouble to neighbors and animals. —G. L. TINKER.

To use gloves is not "desirable" when working with bees, but they are sometimes needful; especially is this so with beginners, and persons of a nervous disposition. Bees will sting through any gloves or mittens, but the rubber gloves are the best to use, all things considered. —THE EDITOR.

◆

A New and admirable portrait of the Hon. James G. Blaine appears on the front page of Frank Leslie's Popular Monthly for May, which contains a notable illustrated article by T. C. Crawford, the well-known Washington correspondent, setting forth officially Secretary Blaine's views, labors and plans upon the great subject of commercial Reciprocity between the United States and Latin America.

Topics of Interest.

Hints on Honey Production.

E. L. PRATT.

Many of us do not work our bees to the best advantage, and I shall lay down a few rules that may be of value to some, perhaps old to others. In the production of comb-honey it is necessary first to secure a large working force by the opening of the white clover harvest, or by June 1, and I know of no simpler manner of securing this large force than by using the double-walled hive and the closed-end frame.

If we have our hive well filled with stores in the Fall, no stimulative feeding will be necessary, and, as skunk cabbage, willow and maple yield pollen so early, it is unnecessary to dabble with any sort of artificial pollen. But there is one thing very essential about this time, and that is to be sure to provide stimulative feed during the cold and wet season that generally comes on about the time fruit bloom is beginning to fail, as it is quite important that the queen be fed liberally in order for her to deposit the required number of eggs a day.

Just before white clover opens, the sections, that have previously been provided with a good article of thin foundation, should be adjusted to the colonies in the strongest condition. It does not pay to monkey with the very weak ones, only so far as to see that they have a good queen, and are doing well. Such colonies should be kept in the frames, and built up for the Fall flow, or for stock another season. It is a good plan to buy young queens from some reliable breeder, and introduce to all such colonies during clover bloom.

There are always one or two colonies that get into the sections at once, and have quite a start made before all the others. Simply shift a row of started sections with a middle row of one not started, bees and all. Continue this practice until all have at least one row of started sections. Another way is to tier two cases of sections above the strongest colonies, leaving out the center row in each case, and hang a frame of brood in all stages in their places. Leave this until a good start is made, when a row of started sections can be placed in the center of each case, bees and all. If they refuse to work after this, it is very evident that they intend to swarm, when every effort should be made to encourage them to do so.

Disturb them as little as possible, and feed a little during unpleasant weather. Adjust a trap to the entrance, and prepare a new hive for each, with starters in the frames not over two inches wide.

Never hive swarms onto full sheets of foundation or drawn comb, or you will be the loser rather than the gainer. When the swarm issues, examine the trap for the queen. When found, remove the trap and adjust it to the front of the new hive, and place it close beside the parent colony. Leave it until the swarm returns, which it will do in a few minutes, hiving itself as nicely as you please.

After the swarm is nicely settled in and on the hive, it can be placed where it is to stand permanently, and the queen allowed to run in among the bees. It is safer to wait until quite late in the afternoon before the queen is released. The case of started sections should be removed from the old hive and placed onto the swarm. If these bees do not show you comb-honey, it is because there is no honey in the field. In a few days the parent colony will have become strong enough to take a new case of sections.

To guard against after-swarming, readjust the trap to the old colony, catch and kill the queens as fast as they come off with a swarm. Then the trap should be removed to allow the last young queen a wedding flight. If increase is not desired, the new hive can be placed on the old stand, and all the remaining bees shaken off the combs in front of the new hive, at the end of the eighth day. The brood remaining can be distributed among the weak colonies, or tiered over some colony that can care for it.

A good cure for a sulky colony, is to take all its brood away, and give full sheets of foundation. When all swarming is over with, look the section-cases over, and jump the filled sections to the outside, and bring those just started on to the center. In a few days more, a new set can be placed under the filled cases on the strongest colonies. Those slow about filling up had better be kept in one case, and new sections added by rows in the center, and gradually tapered down until the close of the clover season.

As soon as the clover season has passed, all the honey remaining on the hives, should come off, and the brood-frames be examined. Wherever honey is found in any quantity, it should be uncapped, extracted, and the empty combs returned to the hives from whence they came. We have found that it does not pay to leave honey in the hive, after clover fails. It is better to extract it, and feed it back when necessary, as the bees will do just as well, if not better, without it, for they will make their own living during pleasant weather. If left on the hive, they will use it for brood-rearing out of season, and thus consume it needlessly. If needed for Winter stores, we have it ready to feed back at any time.

EXTRACTED-HONEY.

In the Spring proceed the same as for comb-honey until the colonies are of good strength, and working well. Just as soon as the flow from white clover commences (or a little before if you can judge it closely), remove the comb the queen is on, and place it, bees, queen, brood and all, in an empty body. Fill the remaining spaces with good, clean brood-combs, and set it onto the bottom-board. Adjust a queen-excluder, and place the body containing all the remaining brood on top of that containing the queen and the one sheet of brood. Fill the empty space left in the top chamber with an empty comb. Close the hive and let them work. If examined in about ten days, the brood in the upper half will be found well hatched out, and honey in its place, while the lower frames will be heavily brooded.

As soon as the honey in the top half is about two-thirds capped, remove the combs and extract the honey. Return all the empty combs but one, and repeat the operation of shifting the queen. Proceed in this manner the entire season, never attempting to extract until all the brood has hatched out of the upper story.

Beverly, Mass.

Relation of Honey-Eating to Longevity.

E. E. HASTY.

When we meet each other face to face it is perhaps as well to show characteristic faces. One phase of my character is to be often finding a mare's nest, with a large setting of eggs in it, and it is to one of these remarkable nests that I invite, for a few moments, the attention of this convention.

Among the stories that have floated down to us from ancient times, is one concerning a remarkable case of longevity in the days of the Roman emperors. If my memory is not at fault, it was Trajan who reigned at the time. The remarkable vigor of mind and body enjoyed by a very aged man attracted general attention, and the Emperor sought an interview with him. The object of the Emperor's inquiry was to ascertain *by what means* such well-preserved faculties were attained, in order that other men might have the same benefit.

The drift of the old man's answer was that it was the external use of oil, and internal use of honey. Of course, all know that temperance, chastity, and the avoidance of all things that put the human faculties to excessive strain, are imperative requirements, if one would live to old age; but the inquiry here evidently is, "What *other things*, besides these well-known ones, conduce to long life?" This particular wise and aged man, it seems, thought that the free use of honey was an important help.

Now, we are not in the oil business to-day, but in the honey business. Is it worth while to pursue the inquiry as to whether the free use of honey actually does prolong life?

So far as I know there is no record of any adequate investigation. Circumstances were not then favorable to vital experiments and records; and the matter has come down to us an undefined surmise—capable enough of proof or disproof, but never actually either verified or overthrown. We ask, therefore, is the game worth the candle? Is it worth the while for anybody to keep the records necessary to settle the question? I, for one, think that it is. At the present day a very moderate amount of expense and trouble, properly directed, and continued through a series of years, would establish the facts.

Before pointing out what these measures are, let me first suggest one way in which the use of honey may reasonably be *supposed* to affect longevity. In this scientific age every one feels ashamed to answer an absurd inquiry. No one will even experiment by tying diseases to the trees with strings, albeit that is a very convenient and inexpensive healing process, and used to be in repute.

Human knowledge of what diseases actually are, has been very greatly increased in recent years. It used to be said, "The doctor takes a drug of which he knows little, and pours it into a system of which he knows less, to cure a disease of which he knows nothing." This saw, when it was invented, was the simple truth. It is not true now.

When a man meets a lion, and the lion tries to eat him, and he strives to beat off and kill the lion, the situation is dire;

but he, at least, has the satisfaction of understanding just what is going on. The modern study of diseases seems to put many of them on a similarly comprehensible footing. Some low form of microscopic, organic life has seized upon the human system, and is trying to *use it* as nest and food, without regard to the interests of the higher life which is in rightful possession. Meantime the rightful life is always making more or less of a fight for itself.

Chills and fevers and spams are not themselves disease. They are efforts the system makes in fighting invisible foes. And the invisible foes constitute the disease. Pretty much the whole problem of medicine seems to be reduced to this: To help the rightful life as much as possible in its fight, and hinder the interloping lower life as much as possible in its fight. This line, along which man has just begun to think and act, is a line that nature and development have been acting upon for thousands of years.

Now, various things tend to show that bees, in their world history, have had a specially hard struggle against microscopic germs, and have developed special defenses against them. Apparently the glandular system, which is so prominent in the anatomy of the bee's head and thorax, is to furnish secretions to mingle with the honey; and this pouring in of secretions, whereby finished honey is made, is for the purpose of making the honey hostile to, and proof against, the lower forms of life.

To poison your enemy and not quite poison yourself, is nature's grand protective game. In the case of honey the game is almost overdone. Probably honey never gives the bees themselves the stomach-ache; but when mankind comes to eat it, quite a proportion of them find it doctored up so strongly that they cannot bear it.

We are asking, then, whether in an age that has accepted antiseptic surgery and antiseptic medicine, we may not profitably make more extensive use of antiseptic food. Most foods are much changed in digestion, but honey scarcely at all. In fact, it is said that if honey is injected directly into the veins, nature lets most of it be, instead of throwing it out as would be done with other substances.

Now, these hints and facts are not *proofs* of the matter we are pursuing; but they are *encouragement for our suspicions*, and permission to look and see if we so desire. If a honey diet is an effective and practical help in nature's warfare against hostile germs, that is the same thing as saying that it is a help in nature's warfare against disease; and what beats off disease, prolongs life.

In this connection we may well remember that it is a very rare thing for an insect to live over one year. Yet the queen-bee lives three or four years—in some rare instances perhaps as many as seven. It seems reasonable to suppose that the secret of her longevity is that she feeds entirely on food that has been made antiseptic by secretions from the glands of worker bees, while other individuals of the colony have suffered all the risks and wear and tear of the preparation. If antiseptic food prolongs life for a queen-bee, why may it not prolong life for a man?

Now, as to the mode of settling the question, in case it shall ever come to be considered important enough to be worth settling. Let some college be chosen that has a large number of students. The University of Michigan would be excellent; or, perhaps, Oberlin would do.

Let one of our experiment stations select a suitable student, who needs a little addition to his purse, appoint him an assistant, and intrust him with the clerical part of the work. Let this student enroll a hundred young persons, say young men between the ages of 17 and 20, who like honey, and will take a little extra pains to use it freely. If practicable, they should be induced to eat from one to three ounces nearly every day.

Then let another hundred be enrolled, as nearly similar as possible in other respects, who are to avoid eating honey at all. Both classes are to report to the roll-keeper at the end of the year how many days of sickness they have had. Each individual, also, is to keep some person instructed to report his death when it occurs. When the time comes for the roll-keeper to leave the college, the experiment station shall appoint some other suitable student in his place.

Thus, it seems to me, the routine part of the experiment would run smoothly, and with very moderate expense. Results would come in something like this: When the *first* deaths occurred, it would be more a matter of accident than otherwise which class they fell in; but after the first dozen years or so, if there is a difference it should gradually come to the front. Meantime, if there is really an important difference in favor of honey-eating, the number of days of sickness during the year in the two different classes should begin to show itself within the first three years.

Attention to the words of a much-assailed, but grand old Book (or something else), has already put the average longevity of Jews far in advance of Gentiles. According to the United States census there are among 1,000 Jews *only a little over one-half* the deaths in a given time (7.11 per year) that occur among 1,000 of the non-Jewish population. Whether honey-eating has anything to do in this case, is a matter I have not investigated.

It is known, however, that there is still surviving (notably in Russia) a sort of religious feeling that it is *wrong* to use sugar, because it is an unscriptural and unauthorized modern substitute for honey. When the matter is fully looked into, it may transpire that the Jews have not entirely outgrown the effects of this feeling, and that they still use honey more freely than our common populace.

There are also two passages of scripture that are sufficiently interesting in this connection to be referred to. The prophet Isaiah, speaking of Christ, says in chapter 7, verse 15, "Butter and honey shall he eat, that he may know to refuse the evil, and choose the good." And again in the same chapter (7:22), speaking of the millennium, he says, "For butter and honey shall every one eat that is left in the land." And the millennial days, we may remember, are the days when a child shall die a hundred years old.—*Read at the Ohio State Convention.*

Bee-Keeping in Southern Wisconsin.

JOHN H. GUENTHER.

I have been keeping bees for 20 years, and at first I had Italians, and then gave the Cyprian bees a trial. I am now convinced that a cross between the Cyprian and pure Italian bees will give the best satisfaction in this locality, and would like to procure some pure Cyprian drones, as I do not like to use the drones from the same hive in which the queen is reared. Last season proved the difference to be so great, that I would rather have one tested Cyprian queen than four Syrians or Italian hybrids.

I know that some will think me crazy, but I know I am not, as a season like last year demonstrates which is the best race of bees, and I am not so much afraid of them now as when I did not understand them.

In general, it is best to Winter bees outside, although it will cost three times as much as to prepare a cellar for them, besides the time spent.

Yesterday morning the mercury registered only 30° above zero, and to-day it is 90° above in the sun, and hardy bees are required to stand that kind of weather.

If Mr. Doolittle can Winter his outside, without protection, I should like to have such to cross with mine, and as for difference in climate, I do not think it can be much warmer with him than it is here.

I do not care for bees that are good comb builders, as they have no time here to do that.

We read a great real about white clover as pasturage, but in the past 20 years I have not read of any one here raising white clover for seed, but several carloads were shipped to a locality near here last year. Alsike is not as good as white clover—I have had it for 20 years—but it is better than red clover.

Queens bought a few years ago, only lasted one year; now I have one that is five years old, and this is an improvement.

If we do not write and talk business we can learn nothing, and our time will be wasted. In my next I will state more particulars concerning the 5-year-old queen.

I will name some of my latest discoveries, which are valuable to me, as well as to others: How to introduce queens received by mail, with a certainty of their being retained; how to fertilize queens at will, provided they are properly cared for; how to make foundation 15 inches deep by 9½ inches wide, that will not sag when no wire is used, and 6 feet to the pound; how to keep bees from flying in unfavorable weather.

Articles on such topics would be more profitable reading than long discussions on such questions as foul-brood, especially in localities where it has never been seen, as in this county.

Theresa, Wis., April 27, 1891.

Texas Apicultural Notes.

A. C. ATEN.

Since writing the last notes from Texas, we have had tolerably warm, and very dry weather, until the last week when we had three very heavy rains, the streams have been high, and the ground is very wet.

Hoar-hound, buffalo clover, and some other plants are in bloom, but bees are merely living. I have heard of a few swarms being cast, but none of mine have swarmed so far as I know.

The recent rains almost insure a good honey-flow from horsemint, in a short time, and it is more plentiful than usual this Spring.

The buffalo clover is a lupine; flowers, all shades from deep blue to pure white, on long raceme; the deep blue being most plentiful.

There is also a small wild pea, with pale blue flowers, which is very plentiful, on which bees are working some at present.

I wish to call attention to one of the grandest trees in the world (if I am allowed to call it a tree), with its thick columbar, palm-like trunk, sometimes 12 or 15 feet high—the Spanish bayonet, or yucca, with its compound panicle of showy, cream-colored flowers. I had one in my yard with a panicle of hundreds of flowers in a solid mass, 2½ feet long, and over 18 inches in diameter, and it kept fresh and beautiful for four weeks. The yucca is an evergreen. This variety has persistent linear, or sword-shaped leaves, sometimes 3 feet in length, and sharp as a needle. The older and larger they are, the more panicles they bear, one on each limb.

I have been feeding some of my bees, and whenever I find a colony of bees very stupid, and flying but little, I know they are out of honey; or if they are carrying out their brood, or have the diarrhea this time of year, that shows that they are out of honey, and are living on pollen, and it is astonishing how soon they will get over this when fed on honey.

I sometimes feed my bees granulated honey, and they do well on it, but about the handiest and best way for me is to take a two-quart Mason glass fruit jar, fill it with honey, tie a piece of cheese cloth, or other thin stuff, over the mouth, and, if a two-story hive, take out two frames and place it upside down on the top of the lower frames; if a one-story hive, take out two frames, lay two small sticks on the bottom, and place the jar on them, mouth downward, and the bees can get the honey. This is on the principle of the pepper-box feeder, and almost any kind of can will do as well. I have no trouble with robbers when I pursue this plan.

Referring to Query 762, page 506, I will say that a 10-frame Langstroth hive, when every frame is full, will not hold much over 50 pounds of honey, and all of the combs in the brood-nest are never full—rarely over two-thirds full. I certainly would not disturb them, and if I fed them comb-honey, I would let them uncap it themselves, which they will do when they need it.

Round Rock, Tex., April 23, 1891.

Prize Essay on the Honey-Bee.

KATE RICHMOND.

In point of antiquity at least the bee is deserving of honor, since it, in all probability, was a native of the Garden of Eden. I wonder, in those halcyon days of the early purity and innocence of man, when the long and beautiful days must have seemed to the two human inhabitants, an endless paradise of glorious Summer, if the beautiful silence was ever displaced, or, perhaps, made more restful, by the "humming" of the bee, as it winged its drowsy flight from blossom to blossom, gathering the honey that must have been spread with such a lavish hand in that queen of gardens.

Amongst the ancient Egyptians the bee was the hieroglyphical emblem of royalty. I do not know whether it became the emblem of royalty to them from the fact that something analogous to a monarchy has frequently been erroneously supposed to exist in a bee-hive. True, there is one of the members of the colony known as the queen, who, at certain seasons, is the object of particular regard on the part of all the other members, but only because the instincts of all are variously directed towards her, at that time, as one indispensable to the objects for which the bee-community exists; but, beyond the fact of having this attendance upon her, those who make a study of the subject, tell us that there is no evidence whatever of anything like authority exercised by the queen.

To modern nations the bee furnishes an example of all that is inspiriting and patriotic. The patriotism is there, at any rate. You do not find the members of a bee-community taking exception to the way in which the affairs are managed. There is no clamoring for promotion, but each insect fills the place for which it was intended, without questioning.

They all co-operate towards the common benefit of the community, and agree that "union is strength," since in repelling invasion, or avenging aggression, the whole community become as one, inasmuch as their several energies are directed to the one object of the preservation of their hive; and, as to the inspiration, no one can deny that an interview with a bee that means business, is decidedly and intensely inspiriting. The interviewer is inspired with feelings of—well, they need not be recounted here, as everyone who has had the pleasure (?) of an interview with the bee, can supply the ellipsis to suit himself.

As a mathematician, the bee can prove Euclid mistaken, when he said, "There is no royal road to learning," since it is a geometrician par excellence, and reached that state, too, without any of those weary interviews in which the human student questions the advisability and accuracy of the Great Mathematician's geometrical plans, but in which the student invariably comes out second best.

Look, for example, at the mathematical ingenuity exhibited by the bee in the formation of the cells in the comb of the hive. They are hexagonal in form, the shape which, as every mathematician knows, will combine the greatest economy of space and material, since the hexagon being perfectly regular, there can, therefore, be no interstices between, and, consequently, every atom of space is economized.

Besides the hexagon, the bee constructs other mathematical figures of various forms that are necessary to the strength and continuance of the hive. And then, in respect of the construction of these mathematical figures, the bee is always ahead of the human student again, for it never makes mistakes. All its proceedings are founded on sure and infallible principles, and you never find a bee unwise enough to question those principles.

The bee furnishes a lively testimony to the proverb "Familiarity breeds contempt." With what supreme and wholesome contempt for the insect are you permeated after an interview, in which the bee, to say the least of it, has been decidedly familiar, and how feelingly you remark to yourself that you will keep it at a distance evermore.

What a lesson is furnished to us, too, in the provident industry of the bee. Observe, will you, how instinct, which is merely a blind impulse as far as the bee is concerned, leads it to provide for a possible future, to care for its young, to provide, in fact, in every way for the healthful continuance of the community; while man, whose superiority over the insect is asserted in the fact that he is provided by the Creator with reason, the noblest of all God's good gifts to man, will look upon to-day only as the day before to-morrow, and defer being prudent to old age, looking forward to a promise of wisdom as a patron of his latter years, and who, when he arrives at old age, finds that his years have far outstripped his wisdom, and that he has now neither the opportunity nor the capability for the wisdom that might have been his portion had proper prudence been exercised in his earlier years.

In studying the habits and work of the bee, we cannot help referring to the instinct shown in their work to a higher power, which makes the instinct subserve the highest ends for which it was created, and we must conclude also that the Creator, in showing His perfect work in the bee, has also shown His perfect love to man. May we have, in a measure, the true philosophy displayed by that wise insect. — *California Fruit Grower.*

Close Spacing, Early Drones, Foul-Brood.

REV. W. P. FAYLOR.

I wish to thank the many readers of the BEE JOURNAL who have written me personal letters of thanks for my articles against close spacing. Indeed, I did not suppose there were so many bee-men on my side of the question.

My five-banded Italians are first on the list to be sending out drones this Spring. I never saw drones reared so early before in this latitude.

I am now satisfied that the queen, worker-bee and drones all come from the same kind of an egg. Repeated experiments prove this to be a settled fact. Drones of an inferior class or kind can also be bred from unimpregnated eggs.

I hope that the Illinois bill on foul-brood may never become a law. Suppose a Government officer comes to my apiary and forces me to permit him to examine a hundred hives, charging me $2 for doing what I wished him not to do; and how about my neighbor across the way with a half dozen box-hives? Would it not be a nice protection against such an intruder to have all our bees in box-hives? The facts are, that three-fourths of the bees are in hives that cannot be examined at all; and shall we who use the modern system bear all the intrusion?

In the State of Illinois one thousand colonies of bees die of starvation to one of foul-brood, and half that number are destroyed by the moth to one by the so-called dreaded disease. When garments become foul and dirty, we may look out for lice; also, whenever combs and bee-hives emit a stench, like results may follow.

It seems that every man sent to the Legislature wants to get some kind of a bill to become a law. I would not thank an officer to take a peep at my gay team and want me to pay him $2 for the look; but I should prefer this to a rambling through my apiary.

State Line, Ind.

[Mr. Faylor ignores the fact that in the Illinois Foul-Brood Bill there is a section empowering the Inspector to order bees in box-hives, in an apiary where the disease exists, to be transferred to movable-frame hives (see Sec. 6, page 534, Bee Journal). There is no danger of an "intrusion" unless the Inspector shall be directed by the President of the Illinois Bee-Keepers' Association to so "intrude." (See Sec. 5.) Neither does the Inspector make any direct charge to the owner of an apiary for examining his bees, as Sec. 17 provides for an annual tax of 5 cents on each colony of bees. As the gentleman lives in Indiana (at least his post-office is in that State), how can any bill passed by the *Illinois* Legislature affect him? We would advise him to read the bill carefully, and familiarize himself with its provisions, before offering any adverse criticisms.—Ed.]

Rearing Queens with the Laying Queen.

C. W. DAYTON.

Having read in the bee-periodicals of the rearing of young queens in the upper stories of hives having a laying queen, I submit my plan for rearing queens and having them fertilized in the same brood-chamber.

The accompanying engraving represents a 14-frame hive of the single story pattern, the front board being cut away to expose the arrangement of the frames. Figures 1 are brood-frames in queen-restrictors, one of which occupies each end of the hive, with other frames between them. Owing to this cut being made in 1889, the reversing device of the restrictor is not shown as now made, but the reversing device has nothing to do with the subject of this article.

We will suppose we have a colony, about May 20, upon five brood-combs in one end of such a hive, in a restrictor, with a division-board at the side of the restrictor, and the rest of the hive is empty.

In a few days the colony will be able to occupy six frames, and as the restrictor contains only five, one of the full combs of brood is taken from the center of the restrictor, the division-board moved along, and the frame of brood is suspended upon the rabbets outside, and an empty comb put in its place in the restrictor.

In three or four days more another comb may be served in like manner, making two frames of brood on the outside, which are moved far enough away from the restrictor to put in an entirely empty comb, as represented by the figure 2. Putting in this empty comb has about the same effect as if it were a solid division-board—it causes queen-cells to be built on the combs (3, 3) of queenless brood.

After the cells are started there is nothing more to do but wait for them to hatch. The laying queen is confined in the restrictor, so that she cannot molest them. As the five combs in the restrictor become crowded with brood, a frame or more at a time may be exchanged for empty ones, and the full ones placed with those containing cells.

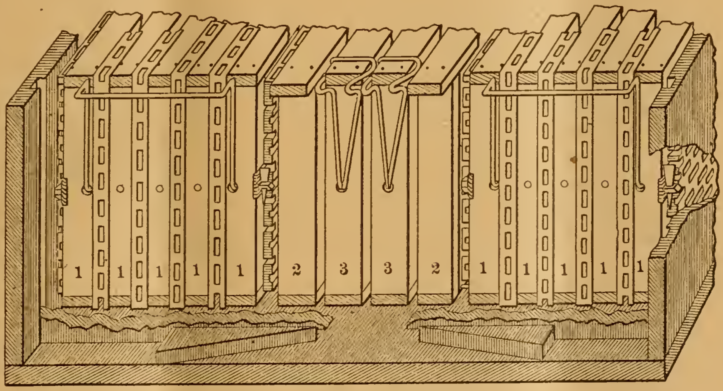
It should be known when the young queens will hatch, previous to which event a perforated queen-excluding division-board should be put in between the frames 2 and 3 on the side toward the restrictor, and the entrance arranged so that all bees going into the restrictor must pass through the perforated division-board.

This leaves the empty frames (2) in a separate apartment. The young queen is brought directly before the open entrance to fly out and become fertilized. It is essential that the young queen be restrained from coming close to the restrictor, as there would be danger of her being balled by the bees. Neither should any brood-combs, over which a laying queen has lately traveled, be allowed in the young queen's apartment.

When the young queen begins to lay there will probably be six or eight brood-frames in her apartment, which have been taken from the restrictor, with which to stock another restrictor to occupy the opposite end of the hive (as in the cut).

Two new frames of brood, 3, 3, the two empty combs, 2, 2, on each side, another division-board as before, and the same system of management, and there will be two laying queens and one virgin queen present in the one brood-chamber. The certainty of this plan depends more or less upon the disposition of the bees, and the number of empty combs in the spaces, shown at 2, 2. While one comb in each space is generally enough, three is sure with any colony.

I accidentally discovered this plan in the Summer of 1885. At the time I was experimenting to produce extracted-honey in single story hives, and avoid the usual mixture of brood through so many combs of honey, by confining the queen upon four combs through the use of perforated zinc division-boards, when the original brood-combs that were separated from the queen and remained in a distant part of the hive, had some queen-cells built upon them. Wire-cloth division-boards were put in, and five out of eight or ten young queens became fertilized.



Dayton's Queen-Restrictor.

In the Spring of 1886 the restrictor was described in the American Bee Journal, on page 393.

As this exhausts the number of queens which it is practicable to have in a hive at once, I find it best to start out in the first place with a hive large enough to hold 25 to 30 combs to provide ample space on the outside of the restrictors, and in the apartments occupied by the frames, 2, 2, to be widened and filled up with extractor combs, or wide frames of sections, and, being at about the beginning of the honey harvest, run the whole force for the production of honey.

Clinton, Wis.

How to Prevent Swarming.

W. P. ODENDAHL.

In the Spring of 1889 I purchased two colonies of Italian bees, and a little later I bought 2 prime swarms. I allowed each of the 2 colonies to cast 2 swarms, and thus I had 8 colonies.

They did exceedingly well—so well, in fact, that by the middle of August the two prime swarms (new colonies) were so over-populous that I was afraid they might swarm, and this I made up my mind to prevent, if possible. I was also anxious to try transferring.

Accordingly, I purchased of a neighbor who kept bees in box-hives, two of the latest and smallest swarms he had, and took them home. I got two new hives ready, and placed them where I wished the transferred colonies to stand. This done, I proceeded to the over-crowded colonies, removed the cover and super and carefully drew out the two center frames, using a little smoke to keep the bees quiet, and brushed all the bees from these two frames, replacing them with frames containing starters.

I now took the two frames of brood and placed them in the center of the new hive, placing the box-hive on top of the simplicity hive. I removed one side of the box-hive, blowing in a little smoke, and cut out the first comb. In this way I cut out all of the comb, driving the bees as I went.

The comb was full of brood and honey, and very soft, but I did not extract the honey. I fixed the whole thing—brood, honey, and all—in frames, and placed them in the new hive, and closed it up. The result was doubly successful: The colony from which I took the full frames having more room and less brood, got out of the notion of swarming at once, so that by the end of the season they had gathered 200 pounds of choice honey, in sections. The transferred colony thrived and prospered so that by Fall they were as strong and heavy as any colony I had. The other hives I treated in the same manner, with the same success.

Late in the Fall I learned that I had made a great mistake by putting the frames containing the starters into the full hives, so in the following Spring I took out those frames, which were then full of comb—mostly drone comb—and replaced them with frames containing full sheets of foundation.

From these experiments I think I have learned how to prevent first or prime swarms from casting a swarm the same season, viz., by simply exchanging a few frames with a weak colony, for by so doing we diminish the brood in the strong colony, thereby discouraging swarming, and at the same time help the weak one to build up.

But this is not all, for by this method I expect to prevent after-swarming by hiving the swarm on a new stand, giving them two frames of brood from the parent hive, replacing the same with frames containing full sheets of foundation, and cutting out all queen-cells but one on the seventh day after the swarm has issued.

This method I think preferable to hiving on the old stand, because, by the latter we take away all the field bees, while by the former we take unhatched bees, thus leaving the parent colony in condition to gather in the sweets without interruption.

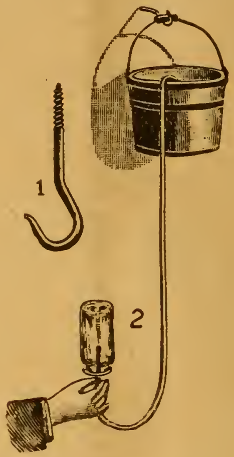
Moline, Ills.

Folding Sections—Inserting Foundation.

R. C. AIKIN.

On page 326, S. F. Trego tells how to dampen 500 sections at once. I have since been using that plan, but instead of the "teapot," I use about 5 feet of ⅛ rubber tube, making a siphon from a pail set above. With care we can apply the water with the tube so that a small portion will go down in each groove, and no other part of the section be wet. Do not use too much water, else the section, after it becomes dry, will be quite loose in the corners. That is one of the objections I have to keeping sections in a cellar or cave. They fold nicely, however, when kept in the cellar, but have to be seasoned after folding, or they will shrink in the super.

In applying water from the tube, move the hand across the crate, reasonably rapid, allowing the stream to strike into the groove openings at an angle of about 45′.



The Siphon I use.

Before applying water, have one end of crate opened, and immediately after, remove 2 or 3 sections from each row, or they will get so tight that you cannot remove them without breaking the crate.

FOLDING SECTIONS.

We use a Crocker press, and I dampen and fold 500 sections in 30 to 40 minutes. But, one does not play much if he folds 7,000 or 8,000 in a day, though he can do 10,000.

On page 488, A. D. Burtch says: "I have put up 100 sections and filled them with foundation, in 11 minutes, and did the work well." I wish he would tell us how. It is too much like a "continued story;" he stops in the most interesting place.

On page 328, F. Greiner says: "No machine is necessary for bending sections. Two skillful hands, with 10 nimble fingers, can put them up at the rate of 1,000 per hour, as I have often done."

My hands have never been able to do that with any sections I have had. When folding, I toss them into basket crates (those that hives were received in) and leave them there until ready to put foundation in.

INSERTING FOUNDATION.

We use the Gray press. It is made to screw fast to a table or bench. I think I have a better plan: Take two 2x4's, 4 feet long; one 2x4, 2 feet long, and one 2x6, 2½ feet long. Form a triangle of the first three named, and place the 2x6x2½ piece upright in the angle formed by the two long pieces of the triangle, and nail or bolt it fast.

On top of the upright nail a short piece of 2x6 horizontally. Next, make a floor on your triangle at the wide end, and screw your press on the top of the upright, just as you would on a table. Place a chair or stool on the little floor for the operator.

This makes a stand that you can put anywhere you wish, and the weight of the operator makes it stand solid in any place. You can place it any room where it will be most convenient.

SOFTENING FOUNDATION.

Take some tin—old pails or fruit cans are as good as any—and make a box 10 inches long, 7 or 8 inches wide, and 4 inches deep (the exact size is immaterial), using two pieces of board 4x10 for the sides, the bottom and ends being of tin.

Now, put in a second or false bottom, of tin, fitting pretty close at the ends, but having a slit, ½ inch by 3 or 4 inches, cut out of each side near the center. To put this bottom in, start a small nail near each corner, 1 inch or less from the bottom, lay bottom No. 2 on them, and drive tacks above. Make another bottom of tin, about ⅔ the length, of the box, and just a little wider, crowd it down almost to bottom No. 2 and close up to one end, nailing through its edges into the wood sides. Have it so wide that it will be concave when crowded in. Invert this box across the press just back of the head or presser-block.

Make a little shelf on the upright or stand that supports the press underneath your box, and so it will not interfere with the treadle. On one end of the shelf put a lamp, and on the other end put a dish of water and the brush for moistening the presser-block. Arrange the lamp so that the chimney will come up close to the concave bottom. The concave will throw the heat to the opposite end, where it strikes the second bottom, passes back to the center, and then up against the first bottom—or, rather, top, as we now have it.

This system of tops is to distribute the heat from the lamp. To secure perfectly even distribution of heat, I found it necessary to put in a second concave or fourth top, about half the length of the box. On top of this box lay a piece of cloth, or burlap, and on this a frame made of three pieces of board, about 3 inches wide, nailed together like three sides of a box without bottom or top, the open side to the front, and the back leaning just a little from the operator.

Light the lamp and place the sheets of foundation on top of the box, with the edge that is to be pressed onto the section downward, and leaning back enough to stand. Put from 20 to 40 sheets on at first, and as soon as they are ready to press place another bunch on, so that by the time the first lot is done they will be ready. Have the foundation cold enough to be handled without bending or denting it, and so that the sheets will not stick together.

If properly managed, when you place the sheet in the section to apply the pressure, the edge will be almost melted, and the bulk of the sheet so cold and stiff that, when you turn up the section and give the foundation a push with your thumb, it will hang in the section as straight as a board.

Place your crates of sections at the left side, and empty supers at the right and back of the operator. Have a box or stand at the right and front, and close enough to be in easy reach, on which to place the super to receive the sections as fast as they are filled with foundation.

Follow these directions and you will have things so handy, that it is a question of your nimbleness how many sections you can fill in a day. One day I put in full sheets of foundation in 1,400 sections in 5½ hours, taking the sections from crates just as tumbled in from the folder, and leaving them in the supers ready for the separators and keying up. The foundation was cut before.

CUTTING FOUNDATION.

I made a box, as long as the sheets, and half an inch wider than two sheets. One end is left out, and the box is deep enough to hold 80 sheets—40 in each bunch. Commencing at the closed end, saw cuts are made down through the sides, making each division 3¾ inches, which is the width I use. Have the foundation quite cold (near freezing is best), and fill the box and drop in little blocks at the side, to hold the foundation firm. Lay pieces of board on top to put your fingers on. Then, with a thin-bladed meat saw, cut down through the piles.

The wax must not be too warm, or the sheets will stick, and you will have to pick them apart. Use water on the saw to prevent sticking.

Fort Collins, Colo.

CONVENTION DIRECTORY.

Time and place of meeting.

1891.

May 7.—Progressive, at Chagrin Falls, Ohio.
Miss Ann Dutton, Sec., So. Newbury, Ohio.

May 7.—Susquehanna County, at Montrose, Pa.
H. M. Seeley, Sec., Harford, Pa.

May 13.—Western Connecticut, at Watertown, Conn.
Edward S. Andrus, Torrington, Conn.

June 2.—Des Moines County, at Burlington, Iowa.
John Nau, Sec., Middletown, Iowa.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—The Editor.

North American Bee-Keepers' Association

President—P. H. Elwood....Starkville, N. Y.
Secretary—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

President—James Heddon ..Dowagiac, Mich.
Sec'y and Manager—T. G. Newman, Chicago.

Bee and Honey Gossip.

Bees Swarming in April.

We are having fine weather, our bees are doing well, and bee-keepers may expect an excellent crop of honey from the poplar in East Tennessee, and basswood and sourwood will yield more nectar, in this section, than they did last year. I have 16 colonies, about half of them in the new Heddon hives, all strong and doing well, and gathering honey from fruit bloom. I had a swarm cast on April 16. Who can beat that, in point of time? Samuel Wilson.

Cosby, Tenn., April 15, 1891.

Wintered Without Loss.

I have 86 colonies of bees, all in good condition at this date. They were wintered on the summer stands, without any loss whatever. John Ferstel.

Inglefield, Ind., April 20, 1891.

Hiving Swarms.

As the swarming season is drawing near, I will give my method of hiving bees. In the first place, I have all my queens clipped, and when a swarm issues, I find the queen, which is always in the front of the old hive, and cage her. Then I remove the old hive to a new stand, and place another hive, intended for the swarm, where the old one stood, and in about 15 minutes the bees will miss the queen, and return to the place where the old hive stood, in search of her. I then release the queen at the entrance to the new hive, and the work is finished. To be sure of their remaining, take a frame or two of brood and eggs out of the old hive, and give to the swarm. O. P. Miller.

Glendon, Iowa.

Prospects for a Good Yield.

Bees are doing well in this vicinity at present. White clover is coming up thickly, and if it blooms the first year from the seed, there should be a good yield of honey. Of what value is the buckeye bloom as a honey producer? H. Mansperger.

Benbow, Mo., April 26, 1891.

[The buckeye blooms early in May, and continues in bloom until about June 1. The honey is as white as that from basswood, and the flavor is thought by some to be superior to that of basswood honey.—Ed.]

Loss Five Per Cent.

My bees came out of winter quarters in good condition, with a loss of only 3 colonies out of 60. They are now carrying in pollen, and breeding up finely. The prospects are good for a big crop of honey. Thos. O. Hines.

Anamosa, Iowa, April 25, 1891.

Queenless Colonies.

On page 507, Guy Kellogg asks: "If a colony of bees come out queenless in the Spring, which would be the best way to provide them with a queen? Give them eggs, or purchase a queen for them?" My answer would be: Mr. K. would be wasting his time trying to rear queens in early Spring, expecting them to be of any benefit. He will find it almost an impossibility to have drones sufficient to fertilize one queen, in early

Spring, to say nothing of several. If he does not have the money to purchase queens, his next best plan is to unite the queenless colony with one having a good queen, and in this way he will be well paid for his trouble. If he has 3 colonies, and 2 are queenless, unite the queenless colonies with the one having a queen, giving them all of the bees and honey. W. L. MARSHALL.
Crab Orchard, Nebr.

Life is Work, Said the Busy Bee.

"Life is a song," so piped the thrush,
Perched on a sweet, white-blossomed bush.
"'Tis an awakening," said the rose,
Whose blushing petals 'gan to unclose.

"'Tis pleasure," breathed the butterfly,
Kissing the rose and fluttering by.
"'Tis work," buzzed the busy bee,
Sipping the rose-sweets greedily.

"'Tis freedom!" shrieked the eagle proud,
Piercing the fleecy Summer cloud.
From leafy copse, the gentle dove
Cooed, softly murmuring, "Life is love."

"'Tis labor! that, and nothing more,"
The wave moaned, breaking on the shore.
"A dream," the mist sighed, "set with tears."
The soft rain wept, "'Tis tears, all tears!"
—FRED LYSTER.

Booming on the Poplar.

I have three apiaries, aggregating nearly 300 colonies, and my bees all came through the Winter in good condition. They are now booming on the poplar, and the prospects were never better. Our crop was not very good last year, on account of an unusual amount of rain. About 30 pounds of honey per colony is the least that I ever knew in this country. T. M. EDWARDS.
Versailles, Tenn., April 27, 1891.

Queer Actions of a Queen.

I now have 33 colonies of bees, having lost none during the Winter, but 2 colonies died of starvation in early Spring. Twenty-four colonies were wintered in a house apiary, and 11 in single-walled hives, on the summer stands. The two that died of starvation were among those wintered on the summer stands. I had a queer experience the other day. I have about a dozen simplicity feeders, on a stand, in which I give the bees water, and in filling these I found a queen in one of them. I picked her up and put her on a board near by. She seemed to be very lively, and in a few minutes had a circle of bees around her. Every few minutes she would deposit an egg on the board. She remained on the board about 3 days, and deposited from 15 to 20 eggs. The third day I tossed her in the air, she circled around a few times, and was lost to sight. O. C. BROWN.
Council Bluffs, Iowa, April 29, 1891.

Perfectly Safe.

Inclosed find a cell which I think is infected with foul-brood, but am not certain. It was taken from an old hive that I got last year, the colony having died this Winter. The combs were crooked, and I could not examine them. Will it be dangerous to feed the honey from this hive to another colony? The hive smells badly, but the dead colony had the diarrhea, and that, I think, is the cause. The sinkage in the cap of the cell is caused by squeezing, but when I cut it out the cap was just about level with the sides, with a small hole in the center, as you will see. I only found four cells like the one inclosed in the hive. Will it do to put combs that are a little moldy into a hive for a swarm? WILLIE C. ADAMS.
Eleva, Wis., April 16, 1891.

[There is no foul-brood in the cell sent. There was a fully developed bee. So far as this cell shows, it would be perfectly safe to use both the combs and honey. It is all right to use combs that are a little moldy. Put one at a time into a hive with a strong colony. The bees will clean all up in good shape.—A. J. COOK.]

Bees Working Diligently.

I wintered 4 colonies of bees on the summer stands, and they are now in splendid condition, and strong colonies—working with a will. They are black bees, and if they do not prove satisfactory this season, I shall try Italians. I have dovetailed hives, to which I wish to transfer them, from the box-hives, but do not dare to try it until the bee-veil arrives. If you hear of any bees that wear rubber coats, so they can work in the rain, I should like to purchase some of them, as it rains here almost every day, and my bees refuse to work in the rain. J. E. PRICHARD.
Port Norris, N. J., April 24, 1891.

We Club the American Bee Journal and the Illustrated Home Journal, one year for $1.35. Both of these and Gleanings in Bee Culture, for one year, for $2.15.

Wavelets of News.

Educators of the People.

The weekly, bi-monthly, and monthly bee-publications are doing more to educate the people in advanced and scientific bee-culture than all the essays and text-books that have been written, as they reach the masses and a class that never buy books—agents hunt them up, and the short article, the everyday experience of practical bee-keepers upon different subjects, suit their fancy, seems to strike their taste, and leads to investigation, experiment, and adoption.—*California Bee-Keeper.*

◆

Wax-Scales on the Bottom-Board.

Wax-scales are found, plenty of them, wasted on the bottom-board, when a swarm is hived in an empty hive without foundation or comb. Few or no wax-scales are found on the bottom-board of a colony run for extracted-honey, if they have abundance of empty combs. The case should be exactly reversed, if bees secrete wax whether needed or not.—DR. C. C. MILLER, in *Gleanings.*

◆

Winter Results and Spring Prospects.

So far as we are able to learn from our correspondents, we think fully 35 per cent. of the bees put into winter quarters in this vicinity have died, up to date, and all danger is not past yet. Fruit trees are just beginning to bloom, and by May 1, will be in full bloom with favorable weather. Then, in some localities, there will be a drouth of honey until clover; while in other localities the flow will be uninterrupted unless on account of unfavorable weather. Bees must be closely watched for some time yet, to see that they have plenty of stores.—*Nebraska Bee-Keeper.*

◆

Experiments in Apiculture.

Bulletin No. 9, issued at the Rhode Island Agricultural Experiment Station, is on our desk.

Mr. Cushman gives his experiments "in the use of artificial heat to promote brood-rearing." Bottles of hot water were placed at the sides of the hive, a double-wall hive being used. We are now experimenting in that same line, but we use no hot water. We have placed a lamp in a box under a hive. So far it works well. The temperature is kept at about 80° in the hive, and the bees are spread over all the combs. On the morning of April 6, the temperature outside the hive was 22°—pretty cold; inside the hive, 85°.

The results of these experiments will be given later on.—*Apiculturist.*

◆

Trade-Mark for Honey.

Let every tub stand on its own bottom. I want my own trade-mark. If the name of E. France & Son pasted on a package of honey is not a sufficient guarantee of a first-class article, I do not want to ride into market on some other name, and I do not want some other fellow using our reputation.—E. FRANCE, in *Gleanings.*

◆

Seasonable Sayings.

When two or more prime swarms come out and cluster together, and are allowed to hang awhile, the queens will usually all be balled, and drop to the ground with their balls of bees, when the queens can be secured and returned to their hives by caging, or without if you can tell where each one comes from.

If you would like to know where a swarm comes from, take away the queen and sprinkle the bees with flour, then smoke them off, and you can soon see where to return your queen.

If you wish to avoid the openings betweens the sections made by the T-tins, holding the sections apart, turn your tins over, put a saw cut through the rest made for the tin to lie on, then with a follower and wedge you can press the sections up tightly, saving much time for the bees (as to fill these cracks between the sections will be their first work on them), and save you much time scraping sections.—JOHN ANDREWS, in the *American Bee-Keeper.*

◆

Spraying Apple Trees.

At least seven insects, all very destructive in Michigan and adjacent States, are destroyed by a single spraying of poison—the codling-moth larva, canker-worm, linden spanworm, tent-caterpillar, and three species of leaf rollers. This remedy is now very commonly used, and soon every orchardist will spray, as surely as he cultivates and harvests.

A mixture not stronger than one pound of london purple or paris green to 200 gallons of water should be used, applied with force in a fine spray, and one application will generally be enough to give excellent satisfaction. The liquid should never be applied until the blossoms have fallen from all the apple trees, even from such late blossoming varieties as Jonathan and Northern Spy.

This latter point is very important, first, because the codling-moth does not lay her eggs until the blossoms fall, and these do not hatch for some days; and so, if the spraying be done earlier a heavy rain might remove much of it before it had done any good.

Again, if the blossoms are sprayed, the nectar is poisoned, and so bees visiting them—which they are sure to do on pleasant days—will be killed. Some losses have been experienced in Michigan, Illinois, etc., and some bee-keepers lost their bees, which, in some cases, was all they had. This is disastrous to bee-keepers, and a serious loss to the orchardist, since bees are necessary to full fertilization of the flowers of our fruit trees, and consequently to a full crop.—Prof. A. J. Cook, in the *N. Y. Tribune*.

Freezing to Destroy Moths.

All the freezing that can be done will have no effect to destroy the eggs of the miller. The only thing that can be done is to keep the sections in a place where it is so cool that the eggs will not hatch before the sections are placed on the hive. The bees will remove all the eggs before they can hatch. There is little or no danger from worms after the sections are filled.

The other day I was thinking of an experiment I would try next Fall. I think I will keep some combs in a warm room until the worms show themselves in the combs, and then place the combs in a cold room the balance of the Winter, to see if it will not starve the worms before Spring. I do not know that it will. It may be like putting a fish under water to drown it. I think this experiment, however, worth testing.——*Apiculturist*.

Rules for "Bringing up a Son."

1. Make home the brightest and most attractive place on earth. 2. Make him responsible for performance of a limited number of daily duties. 3. Never punish in anger. 4. Do not ridicule his conceits, but rather talk frankly on the matters in which he has interest. 5. Let him feel free to invite his friends to your home and table. 6. Encourage his confidence by giving ready sympathy and advice. 7. Do not discourage "collection manias;" they help to give information, and fix habits of investigation and perseverance. 8. Be careful to impress upon his mind that making character is more important than making money.—*Rural Life.*

HONEY AND BEESWAX MARKET.

DETROIT, May 4.—Comb-honey in little demand and light supply, and selling at 14@15c. Extracted, 8@9c. Beeswax firm, at 28@30c.
M. H. HUNT, Bell Branch, Mich.

NEW YORK, May 2.—Market is bare of comb-honey. We quote: Extracted, buckwheat, 7@7½c; California, in good demand, at 7@7½c, and market well supplied; Southern none in market. Beeswax, scarce at 27@29c.
HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

KANSAS CITY, May 2.—Haney market continues about the same; stocks becoming light. We quote: White 1-lb. comb, at 16@18c; dark, 10@12c; California white, 2-lb.,12@15c; extracted, 6@7c. No Beeswax in the market.
CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CINCINNATI, May 4.—There is a fairly good demand for both comb and extracted honey, with fair supply. Comb-honey, 14@16c for choice, in a jobbing way; extracted, 6@8c.

Beeswax is in good demand at 25@30c for good to choice yellow.
C. F. MUTH & SON,
Corner Freeman & Central Aves.

CHICAGO, May 4.—Demand for both comb and extracted honey increasing, and our stock is light. Can use shipments to advantage. 1-lb. sections, 16@18c; 2-lbs., 14@15c; extracted, 7@8c. Beeswax, 30c.
S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, May 4.—Fancy white 1-lb. comb, 18c; fair to good, 17c; dark 1-lb., 14@15c; 2-lb. white comb, 15@16c; 2-lb. dark, 13@14c; extracted, white, 7c; dark, 5@6c.
HAMBLIN & BEARSS, 514 Walnut St.

CHICAGO, May 4.—There is about the usual Spring demand for honey, and best white continues to bring 17@18c; honey that is off in color and condition sells for 2@3c less; very little call for dark comb. Extracted, is selling at 7@8c, in cans or barrels. Beeswax, 27@28c.
R. A. BURNETT, 161 S. Water St.

BOSTON, May 2.—Honey is in fair demand; supply short. White 1-lb. comb is very scarce and wanted, at 18@20c; fair to good, 18@19c; 2-lb. sections, 16@17c. Extracted, 8@9c. Beeswax, 30c.
BLAKE & RIPLEY, 57 Chatham Street.

ALBANY, N. Y., May 2.—The honey market is slow, with small stocks of comb. We quote: clover, 1-lb. comb, at 15@16c; buckwheat, 12@13c. Extracted, light, slow at 7@8c; dark, firm at 6@7c. Beeswax, 25@27c.
H. R. WRIGHT, 326-328 Broadway.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

ADVERTISING RATES.

20 cents per line of Space, each insertion.

No Advertisement inserted for less than $1.00.

A line of this type will admit about eight words. ONE INCH will contain TWELVE lines.

Editorial Notices, 50 cents per line.
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ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

☞ Subscribers who do not receive their papers promptly, should notify us at once.

☞ Send us *one new* subscription, with $1.00, and we will present you with a nice Pocket Dictionary.

☞ The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to pay for another year.

☞ Systematic work in the Apiary will pay. Use the Apiary Register. It costs:

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 25
" 200 colonies (420 pages)	1 50

☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

CLUBBING LIST.

We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

	Price of both.	*Club.*
The American Bee Journal	$1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Guide	1 50	1 40
Bee-Keepers' Review	2 00	1 75
The Apiculturist	1 75	1 65
Canadian Bee Journal	1 75	1 65
American Bee-Keeper	1 50	1 40
The 7 above-named papers	6 00	5 00
and Langstroth Revised (Dadant)	3 00	2 75
Cook's Manual (1887 edition)	2 25	2 00
Quinby's New Bee-Keeping	2 50	2 25
Doolittle on Queen-Rearing	2 00	1 75
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 60	1 50
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	2 20
Western World Guide	1 50	1 30
Heddon's book, "Success,"	1 50	1 40
A Year Among the Bees	1 50	1 35
Convention Hand-Book	1 50	1 30
Weekly Inter-Ocean	2 00	1 75
Toronto Globe (weekly)	2 00	1 70
History of National Society	1 50	1 25
American Poultry Journal	2 25	1 50
The Lever (Temperance)	2 00	1 75
Orange Judd Farmer	2 00	1 75
Farm, Field and Stockman	2 00	1 75
Prairie Farmer	2 00	1 75
Illustrated Home Journal	1 50	1 35
American Garden	2 50	2 00
Rural New Yorker	2 50	2 00
Nebraska Bee-Keeper	1 50	1 35

Do not send to us for sample copies of any other papers. Send for such to the publishers of the papers you want.

Appreciated When Seen.

I put my "Globe" bee-veil on exhibition at our convention at Greenville, Texas, on April 1 and 2, and it was the cause of considerable admiration.

Greenville, Tex. W. R. GRAHAM.

Well Satisfied.

I would not do without the AMERICAN BEE JOURNAL for anything. It is the best and cheapest publication on bees and honey that I know.

THOMAS FOREACRE.
Marshallton, Del.

The Convention Hand-Book is received, and I am well pleased with it. Every bee-keeper should have a copy.

CHARLES WHITE.
Farmers' Valley, Nebr., Mar. 3, 1891

If you have a desire to know how to have Queens fertilized in upper stories, while the old Queen is still laying below—how you may *safely introduce* any Queen, at any time of the year when bees can fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact, everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and is as interesting as a story. Price, $1.00. For sale at this office.

◆

The "Farm Poultry" is a 20-page monthly, published in Boston, at 50 cents per year. It is issued with a colored cover and is finely illustrated throughout.

We have arranged to club the American Bee Journal with the *Farm-Poultry* at $1.35 per year for the two. Or with the Illustrated Home Journal at $1.75.

◆

The Convention Hand-Book is very convenient at Bee-Conventions. It contains a simple Manual of Parliamentary Law and Rules of Order for Local Bee-Conventions; Constitution and By-Laws for a Local Society; Programme for a Convention, with Subjects for Discussion. In addition to this, there are about 50 blank pages, to make notes upon, or to write out questions, as they may come to mind. They are nicely bound in cloth, and are of the right size for the pocket. We will present a copy for one new subscription to the Bee Journal (with $1.00 to pay for the same), or 2 subscribers to the Home Journal may be sent instead of one for the Bee Journal.

◆

When talking about Bees to your friend or neighbor, you will oblige us by commending the Bee Journal to him, and taking his subscription to send with your renewal. For this work we will present you with a copy of the Convention Hand-Book, by mail, postpaid. It sells at 50 cents.

◆

Calvert's No. 1 Phenol, mentioned in Cheshire's Pamphlet on pages 16 and 17, as a cure for foul-brood, can be procured at this office at 25 cents per ounce, by express.

Very Well Pleased. — The Sewing Machine and Scales are received in good order, and I am well pleased with them. They do good work. The sewing machine is ornamental as well as useful. The scales are very handy for family use.—G. Ruff, Burlington, Iowa.

◆

☞ I am well pleased with the Sewing Machine you sent me; any person wanting a good Sewing Machine, one that is equal to the high-priced machines which are sold by agents, can do no better than to send for your $15.00 Machine. They will be agreeably surprised when they see it. Mine is really better than I expected.

W. J. Patterson.

Sullivan, Ills., Dec. 5, 1890.

◆

A Nice Pocket Dictionary will be given as a premium for only **one new** subscriber to this Journal, with $1.00. It is a splendid little Dictionary—just right for the pocket. Price, **25 cents.**

◆

Binders made especially for the Bee Journal for 1891 are now ready for delivery, at 50 cents each, including postage. Be sure to use a Binder to keep your numbers of 1890 for reference. Binders for 1890 only cost 60 cents, and it will pay you to use them, if you do not get the volumes otherwise bound.

◆

Clubs of 5 New Subscriptions for $4.00, to any addresses. Ten for $7.50.

Rural Life!

100 Pages—Price, 25 Cents.

RARELY is such a collection of valuable ideas embodied in a pamphlet like this. Its scope is as broad as its title, and the matter is presented in a concise, "boiled-down" manner, giving experience of many in few words. Among the subjects treated are these: Economy; Prosperity and Adversity; Character; Health; Remedies; Mistakes of Life; Is Life worth Living; Domestic and Household Affairs; Planting and Culture of Vegetables; Planting, culture, trimming and training Vines, Trees and Plants; Bees, Poultry, Live-Stock, Farm Topics, Pithy Paragraphs, etc. It is neatly bound in paper covers, and has a comprehensive index.

FREE AS A PREMIUM We will present this Book to any person sending us one new subscriber for the BEE JOURNAL, or the HOME JOURNAL, with the subscription price for a year.

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246 East Madison Street, - CHICAGO, ILL.

Wants or Exchanges.

Under this heading, Notices of 5 lines, or less, will be inserted at **10 cents per line,** for each insertion, when specially ordered into this Department. If over 5 lines, the additional lines will cost 20 cents each.

WILL EXCHANGE several colonies of bees for either Wood-Workman's Tools or a second-hand Bicycle. For further particulars, address F. B. ELLIOTT,
17D2t La Salle, Ills.

WANTED—To exchange, Japanese Buckwheat for Bees by the pound, and Queens or cash for the same to the lowest offer. Let me hear from you who have plenty.
Address S. ROESE,
19A1t Maiden Rock, Wis.

WANTED—To exchange for about 25 lbs. of Bees, tested Queens, either 3-band or 5-band Italians, to be sent in June. Will give one tested Queen for every pound of bees, any race, sent me, charges paid. If you can spare them and desire a Queen, send bees at once and drop me a card. JACOB T. TIMPE, Express and P.O. address, Grand Ledge, Mich.
19Atf

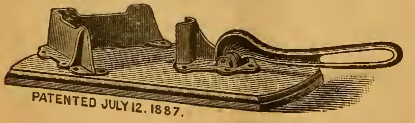
Advertisements.

PAINTS Ready for use per Gallon, **$1.**
Send for FREE sample colors and directions. This is a bargain.
DATE & YORK, 334 DEARBORN, CHICAGO.
Mention the American Bee Journal.

My 23rd Annual Price-List Of Italian, Cyprian and Holy-land Bees, Queens and Nuclei Colonies (a specialty); also, Supplies—will be sent to all who send their names and addresses.
H. H. BROWN, Light Street, Columbia Co., Pa.
19D4t—27C2t
Mention the American Bee Journal.

ITALIAN AND ALBINO QUEENS at the lowest prices.
Address R. H. SCHMIDT, New London, Wis.
17A13t

SECTION PRESS.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WE are now prepared to furnish Wakeman & Crocker's **PRESS for putting together One-Piece Sections**—at wholesale and retail. Price, **$2.00,** by express. By the dozen—rate given upon application.

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ITALIAN BEES AND QUEENS!

Choice stock bred from Imported Mothers for sale in quantities. Write for prices.

E. BURKE, Vincennes, Ind.
19A2t
Mention the American Bee Journal.

BEESWAX AND FOUNDATION

Have advanced **3 cents per pound** by almost all dealers, but I had secured several tons before the advance. To reduce my stock, I will sell during the next 30 days at the following very low prices:

Brood Foundation, in 100-lb. lots, 40c; small lots, 45c; extra light yellow, thin, 50 to 100 lb. lots, 50c; small lots, 55c. My brand of XX white thin, 50 to 100-lb. lots, 55c. Small lots, 60 cents.

Will guarantee Foundation equal to any make and like samples. If you want Foundation in large or small lots, write at once for free samples and 40-page Catalogue. Simplicity Hives, 70 cents, and all other goods equally low.

Bees in full colonies and Nuclei are now ready to ship. If you want Queens, see my low prices. Everything in my line is guaranteed first-class. Address at once,

19Dtf **WM. W. CARY, Colerain, Mass.**
Mention the American Bee Journal.

A Rare Chance!

If you desire a good Home within stone's throw of Railway, Express and Post-Office, in one of the very best

HONEY

Locations in the United States, write me for particulars. Excellent neighborhood, and an Apiary of 90 colonies, with Fixtures, will be sold or leased with the place. Terms easy.

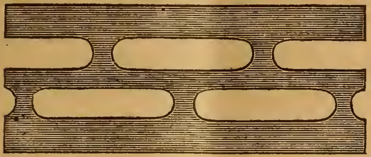
Address **JAMES HEDDON,**
19A2t DOWAGIAC, MICH.
Mention the American Bee Journal.

FIRE! FIRE! FIRE!

YES, if you will fire in your orders for Queens now, either **Five-Banded Golden,** or **Root's Honey Queens** (three-banded) with cash, I will present **YOU** with the following: For an order of one tested Queen, either strain, to be sent in May with $2.00, one pound of either variety of my New Potatoes, post-paid; or for an order of 2 tested Queens in June or July, with $4.50; or, for 6 warranted Queens, June or after, with $5.00, I will give 1 pound of **each variety** of my Potatoes. See descriptions in my ads. of previous issues of this Journal, and send at once. Free Queen offer now withdrawn, but if you will pay express charges, you can have 1 pound of each for $1.00. Order soon.

JACOB T. TIMPE, Grand Ledge, Mich.
19Atf
Mention the American Bee Journal.

PERFORATED ZINC!



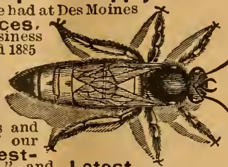
We can now furnish strips of Perforated Zinc with **2** rows of holes, ¾x19, manufactured by Dr. G. L. Tinker, at the following prices:

100 to 500, per hundred	$1.60
500 to 1,000, "	1.55
1,000 to 2,000, "	1.50

All orders promptly filled.

THOMAS G. NEWMAN & SON,
246 East Madison St., - CHICAGO, ILL.

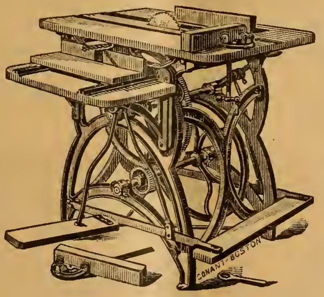
Western Bee-Keepers' Supply House



Root's Goods can be had at Des Moines Iowa, at **Root's Prices.** The largest supply business in the West. Established 1885 Dovetailed Hives, Sections, Foundation, Extractors, Smokers, Veils, Crates, Feeders, Clover Seeds, etc. Imported Italian Queens. Queens and Bees. Sample copy of our Bee Journal, "**The Western Bee-Keeper.**" and **Latest Catalogue** mailed **Free** to Bee-keepers.

JOSEPH NYSEWANDER, DES MOINES, IOWA.
3Ctf

MARSTON'S
Hand and Foot-Power
MACHINERY



CIRCULAR Saw, Iron Frame, Steel Shafts and Arbors, Machine-Cut Gears. Iron Center-part in top. Send for Circular and Price-List. **J. M. MARSTON & CO.,**
21C13t 196 Ruggles St., BOSTON, MASS.

ADVANCE IN PRICE
— OF —
COMB-FOUNDATION

On and after this day, the price of **COMB-FOUNDATION** is advanced

Three (3) cents per Pound

Both Wholesale and Retail,

on account of the scarcity and consequent enhanced value of Beeswax.

CHAS. DADANT & SON,
THOMAS G. NEWMAN & SON.
April 2, 1891.

BEE-KEEPERS' SUPPLIES!

WE are prepared to furnish to Bee-Keepers all kinds of Supplies promptly, and at lowest rates. Correspondence solicited and estimates gladly furnished. Our goods are all made of the best material and are FIRST-CLASS in every respect. Catalogues and Price-Lists free. Reference—First Nat'l Bank, this place.

Address **WM. McCUNE & CO.,**
43D1y STERLING, ILL.

Mention the American Bee Journal.

FOUNDATION **And Sections** are my Specialties. No.1 V-groove Sections at $3.00 per thousand. Special prices to dealers. Send for free Price-list of everything needed in the Apiary.
1Dtf M. H. HUNT, Bell Branch, Mich.

Mention the American Bee Journal.

Two Weeks From receipt of order (cash with the order) Cary, Langstroth or Standard Langstroth Frame Hives, Automatic Foundation-holding frames, in the flat, $1.00; nailed and painted, $1.50. Best work and material. Any hive to order at low prices. Write me. E. A. BALDWIN, West Upton, Mass.
47Dtf

Mention the American Bee Journal.

---

4 Pointers—Read Them

Do you need **Supplies, Bees or Queens?** We furnish good goods at low figures. If you want honey, try our Italian Bees. Our business has been established 11 years. We are reliable and prompt. 20-page Catalogue free.

JNO. NEBEL & SON, High Hill, Missouri.
7Dtf

IF YOU Need anything in the line of **Apiarian Supplies,** it will pay you to send for my Catalogue before placing your orders.
13D6t **J. C. SAYLES, Hartford, Wis.**

FOUNDATION!

Fresh Made! First-Class!

Took two Prizes at Indiana State Fair last Fall—only place exhibited. Brood, 40 cents; Section, 50 cents. Send for Samples. Wax taken in exchange.

15D6t **WILBER G. FISH, Ithaca, N. Y.**

Mention the American Bee Journal.

The Greatest Invention of the Age!

Bees Made to Hive Themselves When they Swarm.

Particulars free. H. ALLEY, Wenham, Mass.
9D6t

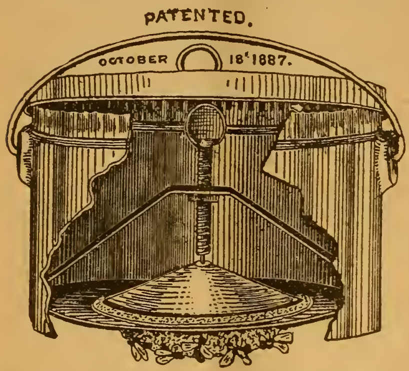
Mention the American Bee Journal.

BEES FOR BUSINESS. BEAUTY.

Our 5-banded Golden Italians are equal to the best as honey-gatherers, aside from being the most beautiful and gentle bees known. Won 1st Premium at Illinois State Fair in 1890. Warranted Queens, May, $1.25, 6 for $6; after June 1st, $1.00, 6 for $5; Tested, at least 3 bands, June and July, $1.75; after July 1, $1.50; Selected Tested, June to Sept., $3; Breeders, after July 1, $5. Make Money Order payable at Cable, Ills.

1D24t **S. F. & I. TREGO, Swedona, Ill.**

Hastings' Perfection Feeders



THESE FEEDERS are now made with a capacity of two quarts, and the price is reduced to **30 cents** each, or $3.00 per dozen, by express or freight. When ordered by mail, add 10 cents each for postage.

These Feeders can be re-filled without moving the Feeder, or disturbing the bees. The letting down of food is regulated by a thumb-screw. It is easy to regulate—either a quart or a spoonful can be given in a day or an hour, as may be required, and where it is most needed, over the cluster of bees. For rapid feeding, two Feeders may be placed over the bees at one time, not a drop of food can be lost, and robber bees cannot get at it. Special rates to dealers. Write for prices.

THOS. G. NEWMAN & SON.
246 East Madison Street, - CHICAGO, ILL.

California Headquarters for ITALIAN QUEENS.

Prices $1.00 and upwards. Send for Price-List. **LUTHER & HORTON,**
6Ctf REDLANDS, CALIF.

WHEN ANSWERING THIS ADVERTISEMENT, MENTION THIS JOURNAL.

HONEY EXTRACTOR

A New Discovery. Differing from all others ever made for the purpose.

It works strong, thorough, neat, handy and rapid. Is the **Cheapest Extractor** known. Send 2-cent stamp for a Cicular of 18 pages,

REV. A. R. SEAMAN,
10C6t Connellsville, Fayette Co., Pa.

BEESWAX WANTED.

Beeswax—We will pay **28 cents** per pound, in Cash, for Yellow Beeswax, delivered here.

☞ To avoid mistakes, the name of the shipper should always be on each package.

THOS. G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

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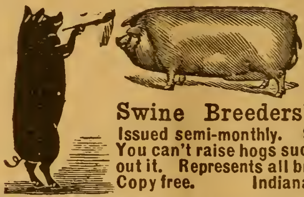
PATENTS, Caveats, and Trade-Marks procured, Rejected Applications Revived and Prosecuted. All business before the U. S. Patent Office promptly attended to for moderate fees, and no charge made unless Patent is secured. Send for "**INVENTOR'S GUIDE.**"

FRANKLIN H. HOUGH,
31Ctf WASHINGTON, D. C.



10th Year.

Swine Breeders' Journal.

Issued semi-monthly. $1.00 per year. You can't raise hogs successfully without it. Represents all breeds. Sample Copy free. Indianapolis, Indiana.

10C6t *Mention the American Bee Journal*

☞ Leipziger Bienen-Zeitung. ☜

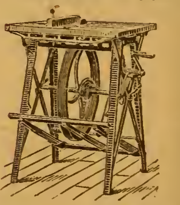
Organ für alle Imker deutſcher Zunge.

Billigſte und reichhaltigſte illuſtrierte bienenwirtſchaftliche Monatsſchrift. Mitarbeiterſchaft der hervorragendſten Imker. Beliebteſte und verbreitetſte Bienenzeitung in ganz Deutſchland und Öſterreich. Preis pro Jahr nur ½ Dollar. Beſtellungen ſind an unſeren Vertreter, Herrn Miſſionsprediger **Stephen Roese** in **Maiden Rock** (Wisconsin) zu richten. Probehefte umſonſt und frei von demſelben.

34Ctf

Established 1857.
BAKER & CO
Satisfaction Guaranteed
DESIGNERS AND
ENGRAVERS ON WOOD
CORNER OF CLARK & MONROE STS.
FOOT BLOCK.
CHICAGO.
DEALERS IN
ENGRAVERS TOOLS & SUPPLIES

Barnes' Foot-Power Machinery.



Read what J. I. PARENT, of CHARLTON, N.Y., says—"We cut with one of your Combined Machines, last winter 50 chaff hives with 7-in. cap, 100 honey-racks, 500 broad frames, 2,000 honey-boxes and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make and we expect to do it with this Saw. It will do all you say it will." Catalogue and Price-List Free.

Address, W. F. & JOHN BARNES,
45Ctf No. 196 Ruby St., Rockford, Ill.

THE AMERICAN BEE JOURNAL
CIRCULATES
ALL OVER THE WORLD
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVII. May 14, 1891. No. 20.

Editorial Buzzings.

And Now the Sun in glory shines,
Dispelling clouds of sorrow;
But do not take your flannels off,
It may not shine to-morrow.

◆

Uniformity of sections and crates should now be discussed freely.

◆

Hon. R. L. Taylor, of Lapeer, Mich., has been suffering from the effects of *La Grippe* ever since April 1. Since that he has been confined in bed most of the time. We are much pleased to be able to say that he is now recovering, and we hope will soon be himself again.

◆

Haldimand Bee-Keepers will meet at Nelles' Corners, on Saturday, May 16, at 11 a.m., when the following subjects will be taken up: 1. Report of Wintering; 2. Natural *vs.* Artificial Swarming; 3. Spreading Brood-Nests to Stimulate Breeding; 4. How to Rear Good Queens? E. C. Campbell is the Secretary.

We Breathe More Freely since reading the following item from the Signal Service reports concerning the damage done to crops in Michigan by the frosts of last week. We hope that all danger is now past, and that no further trouble need be feared. The item reads thus:

> An investigation has been made of the effects of frosts on May 5 and 6. The fruit belt of Western Michigan is said to have received little injury; though the damage has been serious, especially to small fruits and vegetables, in other parts of Michigan. Nearly all unite in saying that no injury to the growing crops has occurred.

◆

Tariff on Queens.—Prof. A. J. Cook writes as follows on this matter:

> Should not the Bee-Keepers' Union act at once on this matter of tariff on queens? The McKinley bill makes the duty on all animals 20 per cent. Bees are animals. Breeding animals are exempt. Thus queens would be free. But this exemption only comes through various certificates, etc. And each importer not having these papers, and not daring to leave his importations in the Custom House, must pay the duty.
>
> Now, I suggest that as all queen-bees come assuredly within the spirit of the law, the Bee-Keepers' Union move at once to secure from the Secretary of the Treasury a ruling admitting all queens free of duty without any fuss or feathers. I believe a proper showing will secure this action. I am receiving various complaints (one very loud one) regarding this matter. The law certainly works great wrong, and I hope we may get a modification through such a ruling as suggested above, that will remove the burden from our importers. Is not this worth an effort?—A. J. Cook.

Most assuredly it is worth the effort, and the General Manager of the National Bee-Keepers' Union has written to the Secretary of the Treasury, pleading for the bees, and asking for a ruling from the Treasury Department, admitting the queen-bees for breeding purposes free of duty, without any unnecessary red tape, as they did under the old law on exemptions. As soon as an answer is received, we will let our readers know the result.

Duty on Imported Queens.

It seems that we are again in trouble concerning the importation of queen-bees. The new "McKinley Tariff" has saddled upon us an import duty of 20 per cent. *ad valorem*, and from this there now seems to be no escape except by special legislation of Congress, which will require time, and considerable labor and expense.

The person who drafted the bill probably never thought about bees being in law classed as "live animals," but they are so classed at the Custom House, and a duty of 20 per cent. is to be demanded on them when imported into this country.

It is true that we might have them exempted under the provision for "the importation of animals for breeding purposes," but that matter is so hedged about with "regulations" with which apiarists cannot comply (such as "giving their pedigree," etc.) that it would be useless to attempt it.

Again, the Deputy Collector at New York claims that "the importation of bees through the mails is prohibited."

We would like to ask, "Since when?" For years past they have been allowed to be received from Italy, and we have not seen any new regulation or law prohibiting their reception. The Deputy Collector no doubt erred in making that statement, and we expect it to be promptly corrected at headquarters.

That our readers may be posted on the whole subject, we append the following correspondence which appeared in *Gleanings* for this month:

Mr. W. C. Frazier, of Atlantic, Iowa, recently wrote us, asking whether there was a duty on imported queens. We replied to the effect that there was none, because queen-bees were used for breeding purposes, and therefore exempt. It seems that Mr. Frazier was not entirely satisfied, and so he wrote to the Deputy Collector of Customs, in New York, in regard to the matter. His reply is as follows:

CUSTOM HOUSE, NEW YORK,
COLLECTOR'S OFFICE, April 2, 1891.

W. C. Frazier, Esq., Atlantic, Iowa:

Sir:—In reply to your letter of the 30th ult., I have to say that "bees" would be classified as "live animals" upon importation, dutiable at 20 per cent. *ad valorem*, under N. T., 251. Animals imported specially for breeding purposes are exempt from duty under N. T., 482, upon compliance with the requirements of the law and treasury regulations—to-wit, production of a duly authenticated invoice — certificate of identification sworn to by the importer—certificate or score and pedigree, authenticated by the proper custodian of the book of record established for the breed in question, and report of the apiarian after examination. The importation of "bees" through the mails from Italy is prohibited by law, and, if so imported, they would be liable to fine and seizure.

Respectfully yours,
H. D. STANWOOD,
Deputy Collector.

We thought there must be some mistake, and, if so, Prof. Cook was just the man to see that the matter were set right, as he had, in years gone by, handled successfully the transmission of queens through the mails. He wrote to his friend and former co-worker of the Michigan Agricultural College, Edwin Willits, now Acting Secretary of the Department of Agriculture, Washington, D. C.; and his reply, which Prof. Cook has very kindly forwarded on to us, is as below:

DEPARTMENT OF AGRICULTURE,
OFFICE OF THE SECRETARY,
WASHINGTON, D. C.

Prof. A. J. Cook:—Yours of the 6th inst. is at hand, relative to the bee-question and the importation of queen-bees from Italy, upon which, under the new tariff, they charge 20 per cent. duty. I have written to the Secretary of the Treasury this day, inclosing a copy of the correspondence, and asking him if it is possible for him to make a ruling that shall let bees come in free of duty.

There is no question but that bees should be classified under the new Tariff Act, as animals; and the general law is, that the duty on imported animals shall be 20 per cent., under Section 251 of the Tariff Act; but in the free list, under Section 482, any animal imported specially for breeding purposes shall be let in free; and then comes the proviso, which is, in substance, that, in order to relieve the importation from the duty, it shall conform to the requirement stated in the Deputy Collector's letter. It is very manifest, that the person who drafted the proviso, had in his eye only domestic animals, and had no thought of any other animals, and, in fact, no thought of bees, or that bees would be called "animals." I am afraid that the proviso is so restricted that the Secretary of the Treasury will have no discretion. However, I have asked him to see whether he can give it some construction that will help us out.

EDWIN WILLITS, *Acting Secretary.*

Accompanying this letter from the Secretary was one from Prof. Cook, which we produce herewith:

Dear Friend Root:—This looks bad. We have a friend "in court" who will do all that is possible for us. It will be bad if we have to wait for special legislation. A. J. COOK.

Agricultural College, Mich., April 24.

It looks as though we should have to submit to the inevitable until special legislation can be enacted in our behalf. As the Acting Secretary says: "The person who drafted the proviso had in his eye only domestic animals." Perhaps I should add further, that the Deputy Collector has probably made an error in regard to bees through the mails. They are not prohibited by law. The January Postal Guide for 1891 gives a list of the European countries to which queen-bees may be sent, and in that list is Italy. It would be a little strange if, reciprocally, Italy could not send any queens to us. If she cannot, it is a very recent enactment of the postal magnates. We will have the law tested again at an early date.

Trouble About Bees.

A neighbor of Mr. Elbert Greeley, at Lorain, O., circulated a petition, asking the City Council to pass an ordinance to prohibit the keeping of bees in the city. Mr. Greeley writes us as follows on the matter:

At a meeting of the Town Council, held on April 20, a petition signed by several citizens, asking that steps be taken to abate a certain bee-nuisance, was referred to a committee for investigation.

At the next meeting, the committee reported that they had investigated the matter by visiting near neighbors and obtaining their views on the question, and while many claimed that there was no cause for complaint, others contended that there was, and stated their grievances.

The report was accepted, and the committee discharged, the Council deciding that it would be unjust to declare the bees in question a nuisance, while there were other places in the town where bees were kept, against which there had been no complaint.

I do not know what move my neighbor may make next, but understand that he will sue me for damages, claiming that my bees prevent him from renting his house, which is located on the adjoining lot.

There are a number of others in the town (population about 5,000) who keep bees, but no word of complaint has been uttered about any bees but mine, and one man has about the same number as myself—40 colonies.

Some of the signers of the petition for the removal of the bees have told me they would never have signed the petition had they known it was spite work.

Mr. France is right about the Bee-Keepers' Union. No bee-keeper knows when he may be called upon to defend himself in court, against the attack of some spiteful neighbor, who thinks to injure him through his bees. Therefore, I say, join the Union at once; do not delay.

I think the Union should have a cipher, for use by telegraph, in case of emergency. In my case the petition was only circulated three or four days before the meeting of the new Council, giving me no chance to defend myself. I also think that every member of the Union should have a copy of the By-Laws. ELBERT GREELEY.

Lorain, O., May 4, 1891.

The Council took the wisest course in its disposition of the petition, as, from the evidence at hand, it appears to have had its origin in a spirit of petty malice. Common justice demanded that Mr. Greeley's bees should not be declared a nuisance, and ordered removed from the city limits while bees kept by others, within the limits of the same city, were not even mentioned.

The Constitution of the Bee-Keepers' Union has been published in the BEE JOURNAL, and also in the Annual Report for the last two years, a copy of which is sent to every member. There are no By-Laws.

Alley's Self-Hiver.—It is said that "The proof of the pudding is in chewing the string." The practical test of any utensil is the best proof of its utility. Mrs. Sallie E. Sherman, Salado, Texas, sends the first report for 1891, concerning the use of this self-hiver, and this is what she says:

> On Saturday, March 28, 1891, I placed one of Mr. Alley's self-hivers at the entrance of a hive from which I knew the bees would swarm in a few days; near this hive was one prepared to receive the swarm when it issued. On Sunday afternoon about 4 o'clock, when walking through the apiary, I saw the bees at work in the new hive. They had swarmed and hived themselves, and were working nicely, without any assistance whatever on my part, except to make the necessary preparation for them. This self-hiver will certainly be a wonderful help to bee-keepers. Mr. Alley, the inventor, should receive not only the heartfelt thanks of all who are interested in bee-keeping, but something more substantial in the way of our liberal patronage.
>
> By the use of the drone-trap and queen-cage combined, which was invented by the same gentleman, I secured 48 swarms out of 49, in 1888, without so much as having to cut a single twig in hiving them.
>
> Mrs. Sallie E. Sherman.

◆

Marine, a village of Madison Co., Ills., is agitated about bees. A man moved into that locality two years ago, and is now circulating a petition asking to have the bees removed. We have been informed that it is simply "spite-work." There are several bee-keepers in that locality, the principal one being Mr. M. Hettel, who has kept bees there for 26 years. The authorities have been dosed with the decision of "the Supreme Court of Arkansas." We hope that will cure the foolishness.

◆

We are Sorry to learn by last week's *Canadian Bee Journal* that Mr. Macpherson, assistant editor of that periodical, is no better. The accident seems to have been much more serious than was at first supposed.

Larger Worker Bees are advocated by C. W. Smith, in the *Apiculturist.* He says:

> I do believe that by care and skill in selecting our queens, and close attention to the conditions necessary for the reproduction of young, such as plentiful feeding, and new brood-combs *made by the bees*, and *renewed each year* (oftener if I could), we shall approach the time when all the drones will be in prime physical condition to mate our young queens, and that by following this method we may look for a larger *worker*-bee in the near future. The fact that the present Italian bee travels *farther* and faster, and gathers more honey than the common small black bee, and that their size is what enables them to do so, demonstrates that this *is* the road to follow.
>
> Double the size of the worker-bee—if we can increase its size by only a trifle, and that trifle on the *end* of its proboscis; then the red clover is at our command, and that means more than double our honey crop.

Here is a hint for the queen-breeders, who will doubtless give it attention. They have been breeding larger queens, finer and more beautiful drones, and now should try their hands at the production of *larger worker-bees.* If they can give us the bees having tongues long enough to gather the wealth of nectar in the red clover, there will hardly be any limit to the honey that can be produced. Let us hear from queen-breeders on this subject.

◆

Cooking Eggs.—Dr. C. C. Miller describes the way they boil eggs at his house thus:

> Pour *boiling* water on the eggs, at the rate of a quart to a half dozen; *cover*, and set on the reservoir. In 10 or 15 minutes the yelk will be done "soft," and longer will make it harder; but the white will not get hard in all day.

◆

Comb-Honey is more of a luxury than a staple article, and we do not believe that the reduction of the price of sugar will affect its price to any particular extent.

BIOGRAPHICAL.

JAMES A. GREEN.

The subject of this sketch, while still in his teens, decided to make the road leading through the apiary his royal road to fortune. Giving to his chosen profession the close study and hard work always necessary to make a success of any profession, bringing to it the stimulus of a decided taste for bee-keeping, and a natural aptitude for its details, he is likely, before he is much older, to find "plenty of room at the top."

Mr. Green was born about thirty years ago in the little town of Dayton, on the banks of Fox River, in Illinois. While he has built up an extensive business, and quite a national reputation among bee-keepers, this town always has been and continues to be his home.

His practical experience with bees began in 1878, during the absence of his father, who was at that time a bee-keeper on a small scale. Swarming time came on, the colonies needed attention, and James and his mother stepped promptly into the breach. All went well with the experiment; and when Mr. Green returned from Colorado, the boy had found his vocation.

He began with 20 colonies of bees in box-hives. He found it hard to gather information about his new business, and, for lack of this knowledge, carried it on for some time in a primitive way, which the modern bee-keeper would consider very antiquated. But James was a very determined boy, and he did not believe there was any need of standing still or going back because the way ahead looked rather difficult. So he diligently read on, gathering from books and magazines some knowledge, and a little insight into the ways of bees. At last, in the A B C of Bee-Culture, he found the solution of his difficulties. James learned his A B C's thoroughly, and henceforth his upward path became comparatively easy.

"Progressive and determined" make a very good combination, and this boy had both qualities. Gradually the old-fashioned methods and appliances gave place to new, improved, and scientific ones. The ingenious hand of the master of the bee-yard supplemented his tools with handy contrivances of his own, and the apiary grew and grew until now, 1891, it numbers 300 colonies, and its product goes to many of the great cities of the country.

More than this, while Mr. Green is still, and always will be, a student, his knowledge of bees and their culture is so wide, accurate, and practical, that he takes rank among the best authorities in these matters. His name was recently sent by the Secretary of the Smithsonian Institute for admission to one of the great scientific societies of France—a high honor for so young a man who has been only eleven years in the work.

Back of every good man is a good mother. Back of nearly every successful man is a sympathetic mother or wife. Mr. Green is not an exception to this rule. From their babyhood, Mrs. Green took an interest in all that her boys cared to do—an interest no less wise and thoughtful than it was devoted. Each boy felt that mother was his particular partner, giving an intelligent appreciation to all the details of his boyish plans for the future, and sympathizing with his ups and downs.

James A. Green.

When Frank, the chemist, hid his beloved bottles on the high shelf of the dining-room cupboard, mother did not scold, nor ever ask to have them taken away. She only told Frank to be very careful how near he placed them to the eatables.

When Kent, the bookworm, buried his face in the dear volume, and shut out all the world beside, she found out what he was reading, and, just as much as her busy life would allow, read with him.

When Jimmy began to work among the bees, she armed herself with veil and gloves, and went with him. And she has read so intelligently the books and magazines concerning the honey-bee—she has studied so carefully its habits—that she is very good authority on the way of making it profitable to its owner. So that it is certainly true that Mr. Green owes much of his present standing in the profession, and his success financially, to his best friend—his excellent mother.

Mr. Green is not a man of one idea solely, nor does he believe in moving in the rut of one's own business. As an extensive and successful bee-keeper, he has been honored by his brethren with the vice-presidency of the Northwestern Bee-Keepers' Association, and it is needless to say that he fills the office well.

A Justice of the Peace in his native town, his office gives him the power to bind in one two loving hearts.

A graduate of the Ottawa High School, he has supplemented an excellent education by a course of careful and valuable reading. A lover of, and also a judge of first-class poetry, Mr. Green has many an apt quotation at his tongeu's end, and he gives them on suitable occasions with point and grace.

This love of choice and thoughtful reading led him very naturally into the Chautauqua Literary and Scientific Circle, of which he is a very faithful and conscientious member. He belongs to the class of 1892, and has for some years been the President of the Ottawa Laurels, C. L. S. C. Mr. Green is an enthusiastic amateur photographer, delighting in flash-light pictures, in which branch of photographic art he has made some good hits, and is marching onward to perfection.

Best of all, he is a quiet, earnest, working, every-day Christian; a member of the Congregational church in Ottawa, and President of the Young People's Society of Christian Endeavor, he is letting his "light shine before men."

Take him all in all, and viewed through the medium of other eyes more impartial than those of a cousin, James A. Green, beside being a live, progressive bee-keeper, is undoubtedly a very nice young man.—LYDIA STRAWN, Ottawa, Ills., in *Gleanings*.

Making Ready for the Fair.—Chicago is already catching step to World's Fair music, says the *Post*. While the transformation of Jackson Park into a pleasure ground for the world is rapidly going on, and the ways and means of making the Exposition the event of the century in World's Fair matters are being daily elaborated, the city itself, aside from World's Fair work proper, is making ready to receive. The plans for connecting and improving the boulevards and parks are waiting the golden touch to put them into execution, the bills for that purpose having passed the Legislature.

Chicago never does anything by halves, or in a faint-hearted way. What man has done man can do, is one of her cardinal maxims, and having begun to brighten up in appearance in the business district, the work will go on until in 1892 and 1893, the whole city will be in gala attire.

* * *

The Bees are a-humming,
The summer is coming,
And soon with the roses the zephyr will flirt.

* * *

Don't be Afraid.—Too little advertising is like sowing too little seed. A farmer in planting corn puts a number of grains into each hill, and is satisfied if one good healthy stalk comes from each planting. It is the constant advertiser that is bound to attract attention. It is the succession of bright, catchy advertisements that refuse to be ignored. That the proper time must be allowed for the fruit to grow, ripen, and be gathered, is as true as that wheat cannot be reaped the day after it is sown.—*Printer's Ink*.

* * *

The World is a looking-glass, and gives back to every man the expression of his own face. Frown at it, and it will in turn look sourly upon you; laugh at and with it, and it is a jolly, kind companion. And so let all young persons take their choice.—*Thackeray*.

Thinks He Knows it All.

MARY P. SAWYER.

Our neighbor Smith is a good old man,
But he thinks he knows it all.
He'll teach everybody whenever he can,
For he thinks he knows it all.
He knows the weather a year ahead,
He's wiser than all the books that are read
And all the time, whatever is said,
He thinks he knows it all.
He'll talk all day, and he'll talk all night,
For he thinks he knows it all.
Some folks may be wrong, but he's always right,
And he thinks he knows it all.

Coronado.

Queries and Replies.

Old Pollen in the Combs.

QUERY 766.—1. Have you positive evidence that bees will remove old pollen when the room is needed for the queen? 2. Having such combs, in what part of the hive would you place them? 3. At what time of the year?—Illinois.

1. Yes. 2. In the center. 3. When needed.—A. B. MASON.

1. I think so. 2. Near the center of the brood-nest.—J. M. HAMBAUGH.

I have no positive evidence that they will do it for this purpose.—H. D. CUTTING.

1. Yes. 2. In the brood-chamber. 3. When the queen is laying rapidly.—J. P. H. BROWN.

1. Yes. 2. In the center of the brood-nest. 3. Any time, when they are needed.—M. MAHIN.

1. Yes. 2. In the center of the brood-nest. 3. In the Spring, or during the Summer.—G. L. TINKER.

1. Yes. 2. In the same place that I would if they contained no pollen. 3. Whenever needed.—R. L. TAYLOR.

1. They will remove it when needed. 2. On one side of the brood-nest. 3. In the Spring, when breeding is rapid.—A. J. COOK.

1. Yes, if it is not as "hard as a rock." 2. Put such combs in the center of the brood-nest, one at a time.—C. H. DIBBERN.

1. No. 2. Leave them where they happen to be, if already in the hive; otherwise put them at the side of the brood-nest.—C. C. MILLER.

1. I do not think we have; at least I have no *positive* evidence of the fact. 2. I should place them side by side with the combs the queen was using for eggs.—J. E. POND.

1. Yes. 2. Place them in the brood-nest. 3. Whenever the temperature is high enough, and brood-rearing is in progress to considerable extent.—JAMES HEDDON.

1. Yes. 2. In the part most convenient of access. 3. Early in the season would be best, but later in the season if you have the combs, and use for them.—MRS. L. HARRISON.

1. Yes; though in some cases they have to nearly destroy the comb to get rid of it. 2. I do not know but that it would be economy to melt them for the wax; but if you wish the bees to clean them out, put them in the center of the brood-nest. 3. In the Spring.—EUGENE SECOR.

If the pollen is musty, cut it out in the Spring, leaving the septum. If it is good do not care for it, the bees will eat it. If one colony, after having been queenless, has several combs encumbered with pollen, exchange these combs for others taken from colonies short of it.—DADANT & SON.

1. Yes. If the pollen is fresh and good it will be used for brood; if not, it will be taken from the cells (even if the combs have to be gnawed down to do it) and tumbled out of the hives. 2. If in June, in the center. If at any other season of the year, at the sides. 3. Use them at any time of the year you wish to.—G. M. DOOLITTLE.

1. Yes. I have had them to remove the pollen when it was so hard and dry that the bees had to cut the comb down to the septum to get the plugs of pollen out, and afterwards draw out the cells. 2. Place them next to the brood. 3. After breeding commences in good earnest in the Spring, soak the pollen-filled combs in luke warm water for a quarter of an hour (have the water sweet enough to make it palatable), then hang in the brood-nest, next to the brood. Only one or two combs must be given to a colony at a time.—G. W. DEMAREE.

1. Yes; the bees will remove it unless it is too hard. If it cannot be readily removed by the bees, you should cut it out down to the septum. 2. They may be put in the brood-nest, or left anywhere in the brood-chamber. 3. In the Spring or Summer.—THE EDITOR.

MAY FLOWERS.

JULIA GREY BURNETT.

It was a morning in the Spring,
When nature had aroused from sleep
And listened as the love-birds sing
Their matins, and their trystings keep.
The woods were decked in rich attire,
The fields were fair, the meadows green,
The hills beyond, the mountains higher,
Were gaily dressed to hail their queen.

The atmosphere seemed full of life
And glad delight at Spring's return;
No breath of envy, discord, strife,
From bird or leaf-bud, flower or fern.
The woods were so inviting fair
To me on such a lovely day,
I bade adieu to work and care,
And hasten'd to their shades away.

I knew where Quaker-ladies grew,
Timid, half-hiding from the light;
And where to find the violet blue,
The star-flower with its eye so bright.
The daffodils in green and gold,
Nodding and smiling at the sun,
As if they knew a tale untold
To mortal since the world begun.

Here on this slope the sunlight streams
Through leaves of green, and branches gray;
I lightly tread where love's fond dreams
Have passed the happy hours away.
Not that I would have listened long
Could I have heard each word they said—
But he was bright, and young, and strong,
And ardently his cause he plead.

I easily could guess the theme,
For blushes pink were on her cheek,
And in her eyes the lovelight beam
Disclosed the Spirit pure and meek.
Unconscious they of strangers near,
Or anything to mar their bliss;
Their whisperings I could not hear—
But, ah ! I'm sure that was a kiss !

Well—this was love's Spring holiday,
When time sped by on winged hours;
And could I, passing, grave or gay,
Have noticed less these bright May flowers ?
She like a dainty, fairy Queen,
And he of wildwood flowers the King:
I left them on their carpet green,
With brook and birds their songs to sing.

Washington, D. C.

Topics of Interest.

Rearing Queens from Eggs or Larva.

DR. G. L. TINKER.

The best way to rear queens is as follows: Take away the queen and all of the brood, of any colony in good condition, and give empty combs and a comb of honey. Cage the queen, and place her upon the frames.

The next day take away the queen and give them a frame prepared as follows: Take an empty frame, or a frame of empty comb, and remove the bottom-bar. Nail in a strip one inch wide between the end-bars, about 1½ inches from the bottom, so that there will be a 2-inch space between the bar and the bottom of the hive in which to have the cells built. Next, select a strip of comb 2 inches square, containing eggs from the queen it is desired to breed from. Cut up into strips of cells, and cut off one-half of the cells on one side of the septum of the comb. Cut these strips up into single cells, each containing an egg—it is not objectionable if some of the cells contain eggs just hatched, but no cell should be used that has a larva large enough to be seen.

Now, turn the frame bottom up, and with a small camel's-hair brush, drop a little melted wax on the cross-bar, and set at once one of the prepared cells in the melted wax, so it will point downward when placed in the hive. Put in 15 or 20 cells in this manner, and then put at once in the prepared colony.

If honey is not coming in, feed well for five days, and a finer lot of queen-cells will never be made through natural swarming.

On the twelfth day cut out the cells and hatch in Alley nurseries, then place in fertilizing hives, introducing them with a little tobacco smoke.

If the cells, after being completed, are taken away from the colony and put in an upper story of any colony above a queen-excluder, we may then take the broodless combs and exchange with the combs of any other colony, giving them prepared cells in the same way. It is not best to allow any colony to build more than one lot of cells, as the second time they will not often complete more than two or three of all the cells given.

The above plan of queen-rearing was first made known at the Convention of Ohio State Bee-Keepers, at Columbus, in 1888. It is a modification of the Alley system, and nothing better can be desired.

There is, however, another point to be considered by those who are desirous of improving their bees. It is the rearing of vigorous, long-lived and prolific queens. A queen that has been exhausted by egg laying is incapable of producing as vigorous queens as one that has been given a rest from egg laying for five or six days, or one that has not been allowed to lay to her full capacity, as when kept in a nucleus hive.

The best plan seems to be to take out the queen of a colony strong in brood and young bees, and cage her on the frames for nine days. Then exchange her for the breeding queen, which should be caged for five days, and then allowed to liberate herself by eating away bee candy. Care, however, is required to see that at the expiration of nine days no queen-cells are left in the hive before exchanging the queens.

A colony so prepared will feed the new queen abundantly, and all the first larvæ that hatch, which are the only suitable larvæ to use in Mr. Doolittle's system of queen-rearing. However, I prefer to rear queens from the egg, or larva just hatched, and would select the first eggs laid by the queen treated as above advised. Should any of the eggs hatch before removal for queen-rearing, we may be sure that the larvæ will be suitable for queen-rearing until they are a day and a half old. The rearing of queens from larvæ under any other circumstances is strongly disapproved of.—*Read at the Ohio State Convention.*

How to Handle the Frames of Hives.

C. A. HATCH.

That every bee-man is not proficient in handling frames of even his own hives, I was convinced by acting as judge at our State Fair a few years since. A premium was offered for best method of handling bees; and, as I now remember, there were four contestants, some of them veterans, and yet two of the four broke out combs or cracked them badly in handling, simply to find the queen.

Another thing that convinces me that all have not the knack of handling Langstroth frames rapidly, is, that they use metal corners, which entirely prevents rapid manipulation in looking for queens, examining brood, or any operation where single frames must be handled.

I had a talk with Prof. Cook once on this subject, and I found he used the same method as here described in instructing his bee-class, and so the method has good indorsement.

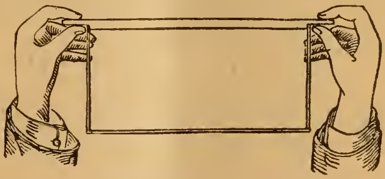
The right side of the hive is rather the best position to operate from, for then you can hold the smoker in the right hand to throw smoke into the entrance, and you can set it on the ground near by, and it is easily reached by the proper hand to use.

After having subdued the bees, take your screw-driver, or whatever tool is used for loosening the frames, in the right hand, handle up and thumb up, as if it were a dagger and you were going to stab. Take the frame next to you. First loosen, by pushing the screw-driver handle from you, while the point is between the frames; grasp the frame at the other end with the thumb and forefinger of left hand at same time, and usually the frame will be loosened. Now take the right-hand end in the same way; and as you bring it up straight out of the hive, move each thumb under the projection of the top-bar, so that its whole weight will come on the ends of the thumbs, while the fingers serve to steady it on the side from you. This brings the frame in front of you so you can examine one side. This we will call the first position, and here is where most mistakes are made.

In order to get to the next position, the bottom-bar is either brought toward the operator, or it is turned away from him until the opposite side of the frame can be examined. In either case the comb is not properly supported by the frame; and if new, and the weather warm, it is liable to drop out by its own weight. The position is also trying on one's hands and fingers, which might not be noticed on a few hives, but will tell in a trying way where it is followed all day.

There are usually but three parts of a frame to be examined, viz.: two sides and the bottom. Unless the colony is unusually strong, no bees will be on the end-bars; so all we want is three positions of the frame to have it all gone over. We have given the first, and now to get the second.

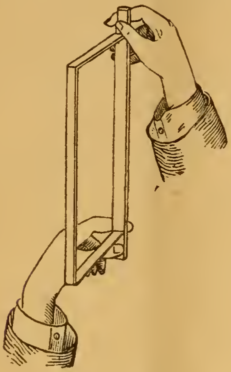
To examine the bottom, raise your right hand, keeping the thumbs in the same position, also lower left hand at the same time, and bringing it toward you also until one hand, the right, is directly over the other, the frame standing on end. While raising your right hand, allow the bottom of the frame to swing toward you. This will give you the second position to examine the bottom.



FIRST POSITION.

The third position is got by allowing the frame to swing around to the left, like a door, the top-bar serving in place of hinges. After this side of the frame has been examined, you can let it swing on around, and you have it ready to put back into the hive in just the same way it came out, so far as the frame is concerned; but you are holding the frame in an entirely different way, as it now rests on the second joint of the first finger instead of on the thumbs, the latter being on top of the frame instead of under, as at starting.

It is a kind of sleight-of-hand you have performed, but not hard to learn when one sees it done, though not so easy to put on paper. It always keeps the comb in a perpendicular position, so it cannot fall out, if ever so brittle or weak, and yet every side has been toward you, and the hands have not been changed nor the frame laid down.



SECOND POSITION.

If you have never handled frames in this way, try it; or if any one has a better way, let him come forward and explain it.—*Gleanings.*

Ithaca, Wis., April, 1891.

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Freight Classification for Bee-Keepers.

J. T. CALVERT.

What is meant by freight classification? It is the arranging of the many different commodities of every conceivable character, which are carried by transportation companies as freight, into groups or classes, as first, second, third, fourth-class, etc., a different rate being applicable to each class.

There are three main classifications, covering the whole country, applicable to almost all interstate business: The official classification used by railroads east of Chicago and St. Louis; the Western, which governs west of the Mississippi and Chicago; and the Southern, used south of Cincinnati. An effort is being made to adopt a uniform classification for the whole country. In the official classification with which the bee-keepers of this district have to do, there are six classes; in the Western there are ten; and in the proposed uniform classification there are eleven.

Who makes these classifications? A committee appointed by the different railroads who use them.

What are goods classified for? Why is it not worth as much to haul a car loaded with one kind of goods as another? The law makes the common carrier responsible for the goods transported, and there is more risk attending the hauling of a car of comb-honey than a car of coal, for two reasons: The honey is of many times greater value, and is also much more liable to damage; and hence the railroad company, in assuming the greater risk, charge a higher price for it, as they should. In this lies the reason for different classes of freight, which go at higher or lower rates.

The class, which is the means of indicating what rate is to be charged, is fixed by the value of the commodity and its bulk, as well as the risk in handling. This is the principle which governs the classification of goods shipped as freight.

But there are other considerations that come in, which affect the classification of a certain article more or less favorably. Strong influences, of one kind or another, are brought to bear upon the committee by different interests having "influence at court" in favor of a low class for the goods they are interested in. The railroads are, of course, anxious to keep rates as high as they can, and the public are clamoring for lower rates. As it is in legislation, some interests are favored while others are taxed to pay for it, so it is here. On the whole, the classifications are very fair and equitable, and it is only occasionally that you see an interest favored.

How does all this concern bee-keepers? There are few bee-keepers who do not have to buy more or less of what they use away from home, and they are interested in the cost of transportation in getting their supplies. Then, if they produce large crops of honey, so as to be obliged to go away from home to find a market, they want to know what it is going to cost to get their product to that market, and their profit is increased or diminished as this cost is more or less.

The present rates from Medina to Chicago are as follows: First-class, 37 cents; second, 34; third, 25; fourth, 17; fifth, 15; sixth, 12. Rates for shorter or longer distances bear about the same ratio to one another.

The commodities in which bee-keepers are more particularly interested are classed as follows at present: Beeswax, first-class; bee-comb, second-class; bee-hives set up, double first-class; bee-hives nested, first-class; bee-hives K. D., third-class; or, in carloads, fourth-class. Empty barrels and kegs are classed as follows: Ale or beer barrels go at actual weight, and third-class freight, while vinegar, cider, molasses, syrup, or other tight barrels, are called 100 pounds each, and go as second-class. Liquor kegs, acual weight, second-class. Kegs, N. O. S., actual weight, 2½ times first-class.

Of course, you are interested in the mention of ale and beer barrels and liquor kegs, only as a comparison with the kinds used to put honey in, to show an instance of favoritism to the liquor interests. Box stuff is classed fourth, and in carloads, sixth-class; but that no longer concerns us, for railroads will not accept bee-boxes, or honey-boxes, or any other kind of boxes made in a bee-hive factory, as anything but bee-hives. Honey in glass, packed, first-class. Honey in cans, boxed, also in kegs, second-class; honey in barrels, third-class. Tin cans, boxed, first-class.

Although the Classification Committee probably intend the term bee-comb to apply to old comb before being rendered to get the wax, yet we take advantage of the term and apply it to comb-foundation, calling this, on our shipping-bills, bee-comb in sheets. When the article you are shipping is not specifically named in the classification, the rule is to class it with analogous articles and comb-foundation is more nearly analogous to bee-comb than beeswax; hence, although of greater value and risk in handling, it goes at a lower rate than beeswax.

Syrup in cans, kegs, or barrels, goes at one class lower freight than honey put up in the same way; and some have recommended billing extracted-honey as syrup, in order to get the lower rate; yet it is a questionable practice. Syrup, as a rule, is not worth as much as honey, and hence not so great an amount is at stake, and a lower rate can be made. The practice of billing bee-hives K. D., as box stuff, is perhaps alike questionable, although the difference in value is not so marked and well defined.

It is hard to see why a certain amount of lumber, cut up to form the bodies, covers and bottoms of bee-hives, should be charged a higher rate of freight than the same amount cut into the same or much smaller dimensions, to be used as packing-boxes; yet it is no doubt owing to the fact that the frames and inside fixtures of the hives go wite thh outside, and thus make the whole of more value than box stuff.

About two years ago, bee-hives K. D. were classed second in small lots; and in a recent visit to Jamestown, I learned that Mr. W. T. Falconer had been before the Classification Committee, and succeeded in having the classification changed to third, and this secured quite a substantial benefit to bee-keepers.

During the past year or two traveling freight agents representing such roads as the Lake Shore & Michigan Southern; Chicago, Rock Island & Pacific; Union Pacific, and others, have visited us, and on examination of the goods we were sending out, they, with one accord, agreed that the rough, heavy parts of hives were properly billed box stuff, as we had been doing. The inspector representing the trunk lines merging into Chicago, did not agree with their opinion, and all such goods which passed through Chicago were changed to bee-hives K. D. Not long ago this was followed by instructions to the agent at Medina not to receive any more goods from us as box stuff. We then entered on argument before the Classification Committee, showing that bee-hives K. D. were of no more value than some grades of lumber in the rough, nor of box stuff, and asked for a reduction in the rate, putting bee-hives K. D., on the same basis as box stuff.

The chairman of the committee says that he will recommend putting the carload rate fifth, instead of fourth as at present, but no further change is proposed. As very few carloads are shipped, this is but very little practical gain, except to show that there is an evident desire on the part of the committee to correct injustice when brought to their notice.

As compared with many interests represented in the classification, bee-keepers have quite fair and reasonable recognition. A few interests are favored, but we can hardly hope to be among the favored ones.

In the matter of shipping comb-honey, it may be well to mention that the classification provides that, if the shipper chooses, to pay one class higher rate—namely, 1½ times first-class, it will be taken at carrier's risk; and, if smashed or damaged, the amount of loss may be recovered. We had a case of this kind a little over a year ago. We had had such luck in getting our honey smashed, that we advised the shipper to send at the higher rate. The honey came, over nine-tenths broken out of the sections, and we recovered over $50 damage on about a ton lot of honey.

Much might be said on the manner of crating honey for shipment, so as to make it reasonably safe; but this is hardly germane to my subject.

It may surprise some of you to know that it costs less to send goods to New Zealand and Australia than it does to Texas, Colorado, and the far Western States. Ocean freight is so much per cubic foot, regardless of bulk or value. Bee-hives in flat, and sections packed solid, go about 100 pounds to four cubic feet. We have recently had a rate of 17½ cents per foot, New York to Brisbane, Australia, which equals 70 cents per 100 pounds, while the rate to the Pacific Coast is just four times that, or $2.80.—*Read at the Ohio State Convention.*

Adulteration of Honey.

BYRON WALKER.

Returning home, after an absence of over a month, my attention is for the first time called to an article in the columns of the BEE JOURNAL, page 416, entitled, "Adulteration—Michigan Convention," which would seem to require some explanation on my part.

I refer to that part of the article headed, "Another Great Mistake," in which the writer, after expressing his indignation and horror, because of the resolutions passed by our late State Convention with reference to the adulteration of extracted-honey, and his conviction that it did not represent "the sober second thought, sense and knowledge of the convention," undertakes, by means of quotations from letters written by its leading members, in reply to inquiries addressed to them in relation to this matter, to show that he was correct in the conviction referred to, and that consequently, "there was no foundation whatever for the passage of that resolution." "That the allegation of that resolution is utterly and completely disproven," etc., etc.

In conclusion, the writer gives some apparently excellent advice as to how to proceed in punishing, by process of law, these adulterators and sellers, whom he has already proven, to his own satisfaction at least, to have only an imaginary existence.

Now, I do not propose, at this time, to enter into any lengthy discussion of this question, for the reason that I am too busy preparing to move my family to Wisconsin—where we will reside for the Summer—to spare the time, had you the space for publishing the same.

Besides, as the editor of the *Review* has seen fit to make this matter of honey adulteration the special topic for this month, I prefer to give what time I can spare in this direction to presenting my views at that time.

It requires but a glance at the letters referred to above, to show that if any body is to blame for the passage of the resolution in question, I am that one. Further, that while I, of all concerned, was the one to furnish your correspondent with the information desired, I wholly failed in doing this, notwithstanding repeated requests by letter.

My excuse for not doing so is simply this: The first letter, directed to me at Capac, was not received, owing to my absence from home, until over a week after it was written; and as the second one (which also reached me about this time) purported to be a *copy* of the first one (and sent because the first one had not been answered), whereas it was wholly unlike the first one (see BEE JOURNAL, page 417), and not having the slightest acquaintance with Mr. S., was led to suspect that his motives in seeking the information were not above criticism, and so paid no attention to either letter.

It will be noticed that in the first letter Mr. S. stated that he was a bee-keeper who simply wanted to get samples of the "stuff" in order to convince his customers that he was selling a pure article; while in the second one (which I repeat he stated was a *duplicate* of the one previously sent) the object of the writer, who professes to have had experience as a public prosecutor in such cases, was to get information that would enable him to secure the conviction of the offending parties.

Now, if Mr. S. is not willing to believe the testimony of Mr. M. H. Hunt as to the existence of large quantities of adulterated honey on the Detroit market, it is not likely that anything that I can say will convince him of the truth of the statement. I will repeat, however, for the information of others, what I stated before the convention: That I found several wholesalers and retailers of such goods in that city, and also that I found numerous grocers handling the same goods in other cities of the State, where

I had marketed honey. These mixtures are commonly put up in jelly glasses, variously labeled — "White Clover Honey," "California Honey," "Michigan Honey," or "Florida Honey."

One specimen of that more often met with than any other, was sampled by the members of the convention; and I believe even the most skeptical were convinced that it was chiefly glucose. Another sample, put up to sell to the fancy grocery trade, I had analyzed by Health Officer Duffield, formerly State Chemist, who pronounced it a clear case of adulteration, with the same substance.

Right here, allow me to say, that I utterly fail to see the point Mr. S. would make when he asks the question: "Is an article that does not taste like honey an adulteration?" In reply, I woul ask, if it is labeled and sold as honey, is not the *injury* done, to all concerned, in an inverse ratio to the amount of honey it contains?

Mr. S. would not have members of the convention sheltering themselves behind the Bee-Keepers' Union; but rather have those who know of any dealers selling such goods, make complaint to the proper prosecuting attorney, etc.

Well, previous to our convention, I laid this matter before the prosecuting attorney of Wayne county, calling his attention to the statute of 1885, which Mr. S. refers to. He informed me that, like the Sunday-closing law, this one was practically a dead letter, as the fine for the first offense was so small ($15 to $25), and no imprisonment being provided for in case of non-payment. Besides, in order to secure the conviction of the offender, it is necessary to *prove* that he *knows* the goods sold to be adulterated—a most difficult thing to do, as these goods are commonly furnished by some other party, who, in turn, gets them of some firm who is supposed to put them up.

Now, suppose one should finally succeed, after repeated adjournments, in convicting the manufacturer. The fine imposed on him would be but a drop in the bucket compared with the profits of the business, and, of course, the traffic would go on just the same, while the expense of such prosecution (to a person away from home) would, under the circumstances, be apt to be a greater burden than any one bee-keeper should be expected to bear for the benefit of the bee-keepers of the State; for Detroit is the honey market of the State. But let the Bee-Keepers' Union take hold of the matter, and the expense would be but a trifle to any one individual concerned, and repeated convictions, with the imprisonment that would be likely to follow, would speedily put an end to the business.

In conclusion, allow me to say, that after Mr. S. has spent as many days as some members of the convention have weeks, and as many dimes as some that I could mention have dollars, in ferreting out and fighting this fraud, he will no doubt be better qualified to criticise the actions of its members.

Capac, Mich.

[Both Mr. Smith and Mr. Walker having been heard on this subject, we shall decline to publish anything further regarding the matter of the resolution passed at the Detroit Convention.—Ed.]

* * *

Popular Errors Regarding Bee-Keeping.

C. A. HATCH.

Perhaps there is no branch of rural industry on which the popular idea is more at fault than bee-keeping.

This is partly owing to the fact that all the operations of the bees are covered from inspection by the hive in which they live, and partly by the efforts of the bee-keepers themselves to throw mystery and witchery about the whole business, so as to add extra flavor to their success, and, perhaps, in some cases to deter others from entering the same field by creating the impression that some kind of a charm, or charmed life, was necessary to success.

The fact is, that there are but few things about it which are to the modern bee-keeper mysterious; and as for the charm, witchcraft, etc., these have all departed, with the rattling of the cow bells to settle swarms, years since,

But, aside from these, there are several things on which the popular mind is at fault; not from any lack of light on the subject, but simply because old impressions have remained, and the public has not cared enough about it to look the matter up.

FEW HONEY FLOWERS.

As to flowers, the popular notion is that every flower secretes nectar, whereas the number that really do secrete honey in sufficient quantity to be available for the bees, is comparatively few. Only to those to which insects are necessary for fertilization, has the All-wise Father seen fit to give this inducement to the bee to visit its honeyed depths. Can we, then, doubt that the nectar is only put there as an inducement to the bee to visit the flower and perform this all-important office of fertilization.

THE QUEEN NOT A SOVEREIGN.

The queen is, by popular consent, regarded as the head or governing power of the colony, when she is more of a subject than a sovereign. In fact, the hive is a republic pure and simple, in which public sentiment decides all things, and patriotism and devotion to the general good, regardless of private claims, is the highest ideal; each individual giving herself up with untiring devotion to public service, not even hesitating to offer her life as a willing sacrifice when the general good seems to require it.

This is not a spasmodic or short-lived sentiment like our Fourth of July patriotism, but an all-absorbing, life-long devotion, her whole life being one continual round of labor to preserve order, feed the dependent, keep everything clean and neat, and store up a surplus—not that she may enjoy ease, but that the coming generations may have plenty.

Contrary to popular belief, the old queen goes with the swarm, and all the old bees at that time in the hive. Bees live but a short time, in Summer but from four to six weeks, instead of from year to year, as some suppose.

A bee stings only on the defensive, popular opinion to the contrary notwithstanding; but is no respector of persons. A may be the offender, but B gets the penalty if he happens to be near just then.

The hive is more for man's accommodation than for the bees, as they will, other things being equal, store as much in a hollow tree, soap-box, or any other hollow receptacle, as in the most elaborate patented hive. So, remember this next time a bee-hive vender, selling "rights," comes along.—*Read before the Wisconsin Agricultural Society.*

Robber Bees in Spring.

Robbers sometimes "clean out" a weak colony in Spring. Whatever you do, do not take a hive away, that the robbers are at work on. If you do, they will only attack a neighboring colony. Take most of the contents out of the hive, but leave at least one comb with a little honey to finish. If you must take the hive away, put another in its place, with something for the robbers to work on.—DR. C. C. MILLER, in *Gleanings*.

CONVENTION DIRECTORY.

Time and place of meeting.

1891.
May 19.—Northern Illinois, at Guilford, Ills.
Chas. S. Winn, Sec., Box 1854, Rockford, Ills.

May 26.—Cortland Union, at Cortland, N. Y.
M. H. Fairbanks, Sec., Homer, N. Y.

June 2.—Des Moines County, at Burlington, Iowa.
John Nau, Sec., Middletown, Iowa.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

North American Bee-Keepers' Association

PRESIDENT—P. H. Elwood....Starkville, N. Y.
SECRETARY—C. P. Dadant......Hamilton, Ills.

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National Bee-Keepers' Union.

PRESIDENT—James Heddon ..Dowagiac, Mich.
SEC'Y AND MANAGER—T. G. Newman, Chicago.

Bee and Honey Gossip.

Chilled Brood.

To-day the mercury is down to freezing, and snow is falling. I expect considerable brood will be chilled in this locality. Shall commence the season with 175 colonies. S. J. SNYDER.

Venice Centre, N. Y., May 5, 1891.

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Join the Union.

I think it the duty of every bee-keeper to support the Union, in order to defend our rights, and secure justice to persecuted bee-keepers. My loss has been 10 colonies out of 40, during the Winter, from lack of stores. FRED SMITH.

Van Meter, Iowa.

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Anticipates a Bountiful Crop.

I examined a few colonies of my bees to-day, and am agreeably surprised to find them wonderfully strong in bees, with plenty of drones, and queen-cells just ready to be capped. My bees, in point of numbers, are at least four weeks ahead of last year, and they have had warm, dry weather to work on the peach and plum bloom. The apple is now in full bloom, and the bees are making the most of it. Last year the apples bloomed in this latitude May 10;

this year, early apples bloomed April 24, so you see it is not surprising for bees to be in fine condition. If the weather is favorable, I shall have some swarms in ten days. White and alsike clovers are looking splendid, and the outlook is encouraging for a bountiful honey crop. My bees wintered on the summer stands with very little loss.

I. J. Glass.

Sharpsburg, Ills., May 5, 1891.

Help the Bees.

At present, I have 12 colonies of bees, having lost 2 colonies during the Winter. My bees are doing very well; some of them having their brood-chamber full of honey, and hanging out. I think it almost too early to give them sections, as I am not working for extracted-honey. Would you give them more room? The white clover is not in bloom yet, but they are gathering honey from fruit bloom.

John H. Rohrer.

Tippecanoe City, O., May 4, 1891.

[If the bees are hanging out, and have no place to store honey, give them section, and in that way assist them to gather all the honey they can.—Ed.]

Plum and Cherry Bloom.

In the Spring of 1890 I had 5 colonies, which increased to 14 by natural swarming. November 1 I put them in the cellar, and on taking them out, April 6, found that 2 colonies had starved to death, and one colony had been destroyed by mice, but the 11 colonies remaining were in good condition. At this date they all have brood hatching, and 3 colonies have begun work in the sections. I expect some early swarms this season. Plum and cherry trees are in bloom, and the bees are working like nailers to get all the nectar out of them. I expect to increase my apiary to 300 colonies, as it is my intention to engage in the business for profit. Working among bees is to my taste. I think the Italians are far ahead of all other bees. There will be 150 acres of flax sown within a half mile of my apiary, and I wish to know if bees gather much honey from flax-bloom.

S. F. Burris.

Wichita, Iowa, May 4, 1891.

[Flax is not much visited by bees until late in the Fall, when better honey-producing plants are scarce. The nectar is bitter and pungent.—Ed.]

Experience of a Beginner.

I have invented a bee-hive the past Winter, and expect to have it patented. My claim for it is big. I am going to give it a thorough trial. I have already transferred a colony to one of them, and shall have six on trial this season. It is an expanding and contracting hive, a queen-restricting hive, a hive for the production of extracted-honey and comb-honey at the same time; and I also claim it will be non-swarming. It is very simple, easy to manipulate, and can be manufactured as cheaply as any two-story hive. I bought the material for the first hive I made, each thing separate, and the cost was 50 cents, painted and complete. When I have more time—say, in a month or so—I will make a model and send it to you, with a full description.

T. O. H.

Jones County, Iowa.

Questions by a Bee-Keeper.

1. Where bees are wintered on the summer stands, is it best to use a cap on the top of the brood-chamber to hold absorbents? 2. Is a super made of ⅜-inch lumber a sufficient protection for the sections during the honey harvest, or should such a super be covered with a cap? 3. What is the proper width, in the clear, for an 8-frame Langstroth hive? 4. Where closed-end frames are used, should there be a bee-space back of the ends, or should the ends of the frames fit close to the ends of the hive?

Le Claire, Iowa. Marion Miller.

[1. Yes.

2. Yes; it is usually made of thin lumber.

3. It is 11¼ inches.

4. They should fill the space, but should be loose enough to be easily lifted in or out.—Ed.]

Nectar, a Correction, Etc.

I observe that Prof. Cook writes unguardedly sometimes. On page 53 of *Gleanings*, 1890, he says: "Nectar is cane sugar dissolved in water." Literally his expression conveys the idea that cane sugar may be dissolved in water to make nectar—that sweetened coffee is nectar! I give the sentence a different version. Fairly interpreted, the meaning is that the saccharine principle, or matter, contained in nectar secreted by honey-producing plants, is identical with that developed in sugar cane. Besides the saccharine matter in nectar, there is mucilage and acid, etc., which, as yet, chemistry has not separated—there being no occasion for it, as with cane juice. On page 578 appears one of my unguarded expressions, which is construed into a very different meaning from that which I intended to convey. I stated that, "Prof. Cook has not broached the subject of the origin of foul-brood." I was well aware that the Professor has held that foul-brood is a germ disorder. In this we have agreed. The points I wrote about were concerning the origin proper—where, when, and how do the germs originate? I hold that the germs—the microbes—originate incidentally by means of fermentation—fermenting of dead brood. The originating of the micro-organisms has been the issue in which Prof. Cook has not joined so far as I know. C. J. Robinson.

Richford, N. Y.

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Bees Storing Honey Very Fast.

Bee-keepers here are greatly discouraged on account of the poor market for their product. Sales are slow, for nice comb-honey in sections, at 10 cents per pound. Our bees did well last year, but the drouth began just as the bees had filled their hives, and only about one-fourth of a crop was secured on account of the bees robbing as soon as their honey was broken. A number of colonies died from neglect, and the moths destroyed many more early in the Spring. Swarming is about over, and harvest has just begun, and unless it rains soon, we shall not be able to take any surplus honey this year, but bees are storing honey very fast, and we are hoping for rain. Should our hopes be realized, there will be more honey produced here this year than ever before.

A. W. Lamkin.

Cotulla, Tex., May 4, 1891.

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Beats all Previous Records.

Bees are booming, and the weather is all that one could wish for queen-rearing. The usual time for starting cell building is May 8, but there are now no less than 100 capped queen-cells in my apiary. Will commence to mail queens by May 20. The season beats all previous records, the colonies being strong enough to swarm, and gathering honey each pleasant day. Henry Alley.

Wenham, Mass., May 2, 1891.

Wind-Flower.

I send you some specimens of a flower that grows in great profusion on the prairies here. It is an excellent honey plant. Will you kindly name it for me through the columns of the Bee Journal, giving the common, as well as the Latin name. It is known here as the crocus flower. Mrs. M. N. Stanley.

Adrian, Minn.

[I am very glad to send the name of the flower which interests Mrs. M. N. Stanley, of Adrian, Minn. It is the prairie wind-flower, or anemone. Anemone patens var. nuttalliana, of Gray. It is a handsome purple flower, and more showy, though no prettier, than our eastern anemone, *A. Nemorosa.* Mrs. Stanley says it is known in Minnesota as the crocus. This is not strange, as the name would be suggested by the form of the flower. It is interesting to know that we may add this to the rich array of honey plants in our American flora. This flower belongs to the crofoot family, and so is related to the peony, larkspur, columbine (so rich in nectar), buttercup, cowslip, meadow rue, liver-leaf or hepatica, and Virgin's bower or clematis. Few of these, however, are remarkable as honey plants.—A. J. Cook.]

◆

Hives for Wintering.

On Nov. 4 a good colony was prepared for the cellar, its weight being 42¼ pounds; on April 17 it weighed 33 pounds. I shall weigh it again, or examine it with a view to taking away some of the old honey. To prepare the hive, make holes at right angles with the entrance, if the bottom-board is fast, and raise up the frames by placing strips on the rabbets. If the bottom-board is detachable, make the holes in a rim, on which the hive is to stand; the object being to secure more ventilation at the bottom—none is necessary at the top in cellar wintering. To-day I found a colony queenless, with not a sign of any brood having been in the hive. The colony is extra strong, with plenty of honey. John A. King.

Mankato, Minn., April 28, 1891.

◆

Supply Dealers should write to us for wholesale terms and cut for Hastings' Perfection Feeders.

Wavelets of News.

Wax Secretion.

I have a theory of my own as to when and why bees secrete wax. They secrete wax whenever they have more honey than they have combs in which to store it away. At such times they have to hold their honey in their sacs—they have no other place to put it. The wax is secreted as a consequence of holding the honey in their sacs. Now, this is the whole sum and substance of wax secretion. Give a swarm of bees a full set of empty combs, and will they secrete wax? No, not much; but give them an empty hive when honey is plentiful, but no combs, then the secretion goes on rapidly. Why? Because the bees' sacs are full of honey, and they have to hold it until combs are built to store it away.

Another case: Hive a swarm in an empty hive when there is a dearth of honey. When the bees have to eat all the honey they can get to keep alive, will they secrete wax? Not any. They have no honey in their sacs. I hived a swarm last September—a good sized one and they lived until cold weather, but never built an inch of comb—then starved. Why did they not secrete wax? No honey.

I have seen it stated in bee-periodicals that only young bees secrete wax. Now, I think that is a mistake. I have no doubt that young bees do secrete wax; but that they never secrete wax after they are old enough to go to the fields and gather honey is not so. I know that bees will secrete wax and build combs until they are six weeks old. Can I prove it? Yes.

Several years ago a bee-man near here hived a swarm of bees in a frame hive that I sold him. Just 21 days after, they had filled the hive full of combs, and a set of boxes with honey, and swarmed. That day the swarm was put into another hive, and they filled that hive also, in three weeks. Now, do you not see that this last swarm of bees were at least a part of the first swarm? or, in other words, every bee in the last swarm was one of the first swarm, and was not less than 21 days old, and they could not get young bees in the second hive in less than 21 days more? So the same lot of bees were secreting wax and building comb for six weeks.

I believe that, as long as a bee lives, it can secrete wax and build comb with it, and that old bees can secrete wax as freely as young ones, and that wax is never secreted to any amount unless the bees have to hold their honey for the lack of room to store it away, and they cannot secrete wax unless they are holding honey in their sacs.—E. France, in *Gleanings*.

Standard for Honey Exhibits.

At the convention in Albany, the desirability of a standard of comparison in awarding premiums on bees at Fairs and Expositions was touched upon. It is a good idea, and I have long thought that a similar standard, or scale of points, should be furnished the judges of honey at such exhibitions. Better justice would be done exhibitors, awards being many times made without intelligent inspection. That is to say, they are made (with the best of intentions on the part of the judges) in an off-hand manner.

A case in point occurred at a State Fair. After an award had been made upon a specimen of comb-honey, some of the other exhibitors decided to examine it, when it was found that the case contained a few sections of white honey, while the remainder was dark and inferior. The case was closed, and nothing, so far as I am aware, was ever said; but certainly the superficial examination of the judge resulted in injustice to exhibitors of better honey.

If the idea should meet with approval, it is perhaps not too late to induce officials to put it into the premium lists of Fairs and Expositions to take place during the coming Summer and Fall. Brought thus to the notice of bee-keepers, it would have an educational value, the effect of which would appear in the better grading of honey for market. I submit the following scale for amendments:

HONEY—	Color, 5. Body, 5. Flavor, 5	15
COMB—	Straightness, 5. Color of capping, 5. Completeness of capping, 5	15
	Uniformity	10
	Style	10
	POSSIBLE	50

By "uniformity" is meant the closeness of resemblance in the sections composing the specimen. "Style" includes the attractiveness of section and case, also absence of propolis.—Emily E. West, in *Gleanings*.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

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20 cents per line of Space, each insertion.

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ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

☞ Subscribers who do not receive their papers promptly, should notify us at once.

☞ Send us *one new* subscription, with $1.00, and we will present you with a nice Pocket Dictionary.

☞ The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to pay for another year.

☞ Systematic work in the Apiary will pay. Use the Apiary Register. It costs:

For	50 colonies (120 pages)	$1 00
"	100 colonies (220 pages)	1 25
"	200 colonies (420 pages)	1 50

☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

If you have a desire to know how to have Queens fertilized in upper stories, while the old Queen is still laying below—how you may *safely introduce* any Queen, at any time of the year when bees can fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact, everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and is as interesting as a story. Price, $1.00. For sale at this office.

◆

The "Farm Poultry" is a 20-page monthly, published in Boston, at 50 cents per year. It is issued with a colored cover and is finely illustrated throughout.

We have arranged to club the AMERICAN BEE JOURNAL with the *Farm-Poultry* at $1.35 per year for the two. Or with the ILLUSTRATED HOME JOURNAL at $1.75.

◆

The Convention Hand-Book is very convenient at Bee-Conventions. It contains a simple Manual of Parliamentary Law and Rules of Order for Local Bee-Conventions; Constitution and By-Laws for a Local Society; Programme for a Convention, with Subjects for Discussion. In addition to this, there are about 50 blank pages, to make notes upon, or to write out questions, as they may come to mind. They are nicely bound in cloth, and are of the right size for the pocket. We will present a copy for one new subscription to the BEE JOURNAL (with $1.00 to pay for the same), or 2 subscribers to the HOME JOURNAL may be sent instead of one for the BEE JOURNAL.

◆

When talking about Bees to your friend or neighbor, you will oblige us by commending the BEE JOURNAL to him, and taking his subscription to send with your renewal. For this work we will present you with a copy of the Convention Hand-Book, by mail, postpaid. It sells at 50 cents.

◆

Calvert's No. 1 Phenol, mentioned in Cheshire's Pamphlet on pages 16 and 17, as a cure for foul-brood, can be procured at this office at 25 cents per ounce, by express.

CLUBBING LIST.

We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

	Price of both.	*Club.*
The American Bee Journal	$1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Guide	1 50	1 40
Bee-Keepers' Review	2 00	1 75
The Apiculturist	1 75	1 65
Canadian Bee Journal	1 75	1 65
American Bee-Keeper	1 50	1 40
The **7** above-named papers	6 00	5 00
and Langstroth Revised (Dadant)	3 00	2 75
Cook's Manual (1887 edition)	2 25	2 00
Quinby's New Bee-Keeping	2 50	2 25
Doolittle on Queen-Rearing	2 00	1 75
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 60	1 50
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	2 20
Western World Guide	1 50	1 30
Heddon's book, "Success,"	1 50	1 40
A Year Among the Bees	1 50	1 35
Convention Hand-Book	1 50	1 30
Weekly Inter-Ocean	2 00	1 75
Toronto Globe (weekly)	2 00	1 70
History of National Society	1 50	1 25
American Poultry Journal	2 25	1 50
The Lever (Temperance)	2 00	1 75
Orange Judd Farmer	2 00	1 75
Farm, Field and Stockman	2 00	1 75
Prairie Farmer	2 00	1 75
Illustrated Home Journal	1 50	1 35
American Garden	2 50	2 00
Rural New Yorker	2 50	2 00
Nebraska Bee-Keeper	1 50	1 35

Do not send to us for sample copies of any other papers. Send for such to the publishers of the papers you want.

Binders made especially for the BEE JOURNAL for 1891 are now ready for delivery, at 50 cents each, including postage. Be sure to use a Binder to keep your numbers of 1890 for reference. Binders for 1890 only cost 60 cents, and it will pay you to use them, if you do not get the volumes otherwise bound.

Bee-Keeping for Profit, by Dr. G. L. Tinker, is a new 50-page pamphlet, which details fully the author's new system of bee-management in producing comb and extracted-honey, and the construction of the hive best adapted to it—his "Nonpareil." The book can be had at this office for 25c.

Clubs of 5 New Subscriptions for $4.00, to any addresses. Ten for $7.50.

HONEY AND BEESWAX MARKET.

DETROIT, May 11.—Market entirely bare of comb-honey, which is quoted at 14@15c. Extracted, 8@9c. Beeswax firm, at 29@30c.
M. H. HUNT, Bell Branch, Mich.

NEW YORK, May 9.—Market is bare of comb-honey. We quote: Extracted, buckwheat, 7@7½c; California, in good demand, at 7@7½c, and market well supplied; Southern none in market. Beeswax, scarce at 27@29c.
HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

KANSAS CITY, May 11.—The demand is light for all kinds of honey, especially extracted and 2-℔. California comb. We quote: White 1-℔. comb, at 16@18c; dark, 12@14c; white, 2℔. comb, 12@13c; 2-℔. California and Extra California comb, 10@12c. Extracted, 6@6½c. No Beeswax in the market.
CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CINCINNATI, May 11.—There is fairly good demand for both comb and extracted-honey, with fair supply. Comb-honey, 14@16c for choice, in a jobbing way; extracted, 6@8c. Beeswax is in good demand at 25@30c for good to choice yellow.
C. F. MUTH & SON,
Corner Freeman & Central Aves.

CHICAGO, May 11.—Demand for both comb and extracted honey increasing, and our stock is light. Can use shipments to advantage. 1-lb. sections, 16@18c; 2-lbs., 14@15c; extracted, 7@8c. Beeswax, 30c.
S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, May 11.—Fancy white 1-℔. comb, 18c; fair to good, 17c; dark 1-lb., 14@15c; 2-lb. white comb, 15@16c; 2-lb. dark, 13@14c; extracted, white, 7c; dark, 5@6c.
HAMBLIN & BEARSS, 514 Walnut St.

CHICAGO, May 11.—Very little comb-honey being sold; prices are about the same, with really very little fancy goods offered. Best white comb, 17@18c; extracted is steady, at 7@8c, for that which is in good condition. Beeswax, 28c.
R. A. BURNETT, 161 S. Water St.

BOSTON, May 9.—No change in prices of honey; sales a little slow, on account of extremely low price of maple sugar. White, 1-lb. comb, 18@20c; fair to good, 18@19c; 2-lb. sections, 16@17c. Extracted, selling at 7½@8½c. No beeswax on hand.
BLAKE & RIPLEY, 57 Chatham Street.

ALBANY, N. Y., May 9.—The honey market is slow, with small stocks of comb. We quote: clover, 1-lb. comb, at 15@16c; buckwheat, 12@13c. Extracted, light, slow at 7@8c; dark, firm at 6@7c. Beeswax, 25@27c.
H. R. WRIGHT, 326-328 Broadway.

A Nice Pocket Dictionary will be given as a premium for only **one new** subscriber to this JOURNAL, with $1.00. It is a splendid little Dictionary—just right for the pocket. Price, **25 cents.**

Please send us the names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you.

Wants or Exchanges.

Under this heading, Notices of 5 lines, or less, will be inserted at **10 cents per line,** for each insertion. when specially ordered into this Department. If over 5 lines, the additional lines will cost 20 cents each.

WANTED—To exchange for about 25 lbs. of Bees, tested Queens, either 3-band or 5-band Italians, to be sent in June. Will give one tested Queen for every pound of bees, any race, sent me, charges paid. If you can spare them and desire a Queen, send bees at once and drop me a card. JACOB T. TIMPE, Express and P.O. address, Grand Ledge, Mich.
19Atf

WANTED—A steady, sober and industrious young man for general farm work, all the year round, at $30.00 per month and board; or a young couple at $45.00 per month and board. Correspondence invited with anyone desiring to come to California, to make it their home.
F. M. HART,
20A1t Travers, Tulare Co., Calif.

Appreciated When Seen.

I put my "Globe" bee-veil on exhibition at our convention at Greenville, Texas, on April 1 and 2, and it was the cause of considerable admiration.

Greenville, Tex. W. R. GRAHAM.

Well Satisfied.

I would not do without the AMERICAN BEE JOURNAL for anything. It is the best and cheapest publication on bees and honey that I know.

THOMAS FOREACRE.
Marshallton, Del.

The Convention Hand-Book is received, and I am well pleased with it. Every bee-keeper should have a copy.

CHARLES WHITE.
Farmers' Valley, Nebr., Mar. 3, 1891

Convention Notices.

☞ The next convention of the Northern Illinois Bee-Keepers' Association will be held Tuesday, May 19, at the residence of Russell Marsh, in Guilford, Ills.
CHAS. S. WINN, Sec.,
Box 1854, Rockford, Ills.

☞ The Spring Meeting of the Cortland Union Bee-Keepers' Association will be held at the residence of President J. H. Kennedy, 126 Groton Ave., Cortland, N. Y., on Tuesday, May 26, 1891. A special invitation is extended to the ladies. All interested are invited.
J. H. KENNEDY, Pres.
M. H. FAIRBANKS, Sec., Homer, N. Y.

☞ The Des Moines County (Iowa) Bee-Keepers' Association will meet at the Court House, in Burlington, Iowa, on Tuesday, June 2, 1891, at 10 a.m. It is intended to organize a Southeastern Iowa Association. All interested in bees and honey are cordially invited to attend.
JOHN NAU, Sec., Middletown, Iowa.
GEO. BISCHOFF, Pres., Burlington, Iowa.

Advertisements.

Why Suffer

SUCH TORMENT,

When gentle **Bees** can be had for the same money. You will miss it if you do not order a **Yellow Carniolan Queen** this season. All Queens strictly pure, and first-class in every respect. **Satisfaction** guaranteed. Safe arrival to all parts of Continent.

Queen Circular free.

E. L. PRATT
Pratt Bee-Farm,
Beverly, - Mass.

20Atf
Mention the American Bee Journal.

For Cash! Pure Italian Queens in May and June. One untested, 80c; per doz,, $9.00. Tested Queens, $1.50 each. Guarantee safe arrival. Address
D. E. ALDERMAN, Clinton, Sampson Co., N. C.
20A1t
Mention the American Bee Journal.

BEE-HIVES Sections, Comb-Foundation and Supplies. Send for our free Price-List.
Address **SAMUEL JONES,**
Highland Park College, Des Moines, Iowa.
20A1t
WHEN ANSWERING THIS ADVERTISEMENT, MENTION THIS JOURNAL.

SUPPLIES BY ELECTRICITY! Observatory Hives, Improved Supers, Shallow Frame Hives. **E. CALVERT,**
17Atf P.O. Box 105, Des Moines, Iowa.

Turkeys for Market AND Turkeys for Profit.

By "FANNY FIELD."

WRITTEN for those who are interested in Turkeys and wish to make them profitable. She reared in one year 150 Turkeys—and did the work for a family of five—netting her $300. No farming pays so well as Turkeys.

CONTENTS.—Age of breeding stock, about the Gobbler—Which breeds are best and most profitable—Setting the eggs—Care while hatching—Profit per head—Care until fully feathered—Food for the young—Save the feathers, they bring good prices—Number of hens to a Gobbler—Naraganset Turkeys—White Turkeys—Bronze Turkeys—Common Turkeys—To restore chilled Turkeys—Diseases of Turkeys—Leg weakness—Killing and dressing—Mark your Turkeys—Marketing—Capital and number to begin with—Tells all about the Turkey business Price, **25 cents.**

Given for One New Subscriber to this paper for one year.

THOS. G. NEWMAN & SON,
246 East Madison St., - CHICAGO, ILL.

THE AMERICAN BEE JOURNAL
CIRCULATES
ALL OVER THE WORLD
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVII. May 21, 1891. No. 21.

Editorial Buzzings.

Pity the One who never sees
The butterflies, the birds, the bees,
Nor hears the music of the breeze
When zephyrs soft are blowing.
Who cannot in sweet comfort lie
Where clover blooms are thick and high,
And hear the gentle murmur nigh
Of brooklets softly flowing.

◆

Frost last Saturday night, in the northern portions of Illinois and Ohio, greatly damaged fruit and vegetables, entailing a loss of many thousands of dollars. Even growing corn was nipped and wheat badly frosted.

◆

The Foul-Brood Bill was killed in the Wisconsin Legislature. It died for the want of votes. The disease is spreading in that State, and the Wisconsin *Farmer* of May 9, says: "If the disease continues to spread, the time will soon come when bee-keeping in Wisconsin will be a thing of the past."

Importing Bees by Mail.—This is now illegal, as will be seen by the following correspondence. Mr. O. B. Barrows writes us from Iowa thus:

> On May 5 I saw the following paragraph:
>
> The Customs Collector of New York is authorized by the Customs Department to order the release, on the expected arrival there, of a shipment of Italian queen-bees, sent through the mails from Italy, to a citizen of Iowa, upon payment of a fine equal to the duty thereon. These bees are liable to duty at 20 per cent. ad valorem.
>
> I immediately wrote to the Custom House officer at New York, and to-day (May 11) received the following reply:
>
> "I am in receipt of your letter of the 5th inst., stating that you anticipate the arrival in this country, through the mails, of a package to your address, and asking for certain information as to the duty thereon, etc. I have to say that as soon as any package arrives in the mails addressed to you, you will be duly notified of the arrival, and as to what steps will be necessary for you to take in the matter; but you are informed that the importation through the mails of any dutiable merchandise (except books and printed matter), is a violation of the law, and subjects the articles so imported to forfeiture."
>
> As the AMERICAN BEE JOURNAL (if I remember rightly) has stated that there was no duty on bees, will the editor please explain whether this is a new (under the McKinley Bill) law, or a new construction of the old law?
>
> Each bee-keeper expects to comply with the law, if he knows what it is, and perhaps you can enlighten some others who are as ignorant as your subscriber. O. B. BARROWS.

As will be seen on page 632 of our last issue, this is the result of the new (McKinley) law. Queen-bees were admitted free under the old law exempting "animals for breeding purposes." The ruling is *new*, placing them under similar restrictions (in the matter of pedigree, etc.) to horses, cattle, and other animals. Had it not been *new*, we should have informed our readers early enough to have prevented this annoyance.

◆

Do Not Open the hives when it is too cold in the shade for the bees to fly.

The Situation.—The following from Hon. J. M. Hambaugh, at Springfield, Ills., will explain the present standing of the various matters pertaining to bee-culture now before the Legislature:

> I was probably a little premature when I stated that we had safely carried every bill pertaining to bee-culture through the committees, except that of the $5,000 appropriation for the Columbian Exposition.
>
> The Smith Foul-Brood Bill went through the committee, to which it was first assigned, by a unanimous vote, but when it came back to the House, in consequence of its having an appropriation clause in it, the Speaker again recommitted it to the Appropriation Committee, and some of the honorable members seem to question its virtues, from the fact of there being no pressure or favorable expression from the bee-keepers, and a vote was taken, and its further consideration postponed for the present.
>
> Now, I cannot say how true this may be, but it seems to me the bee-keepers are standing in their own light when they do not come forward in a body, and signify a willingness to help in the matter that is of such vital importance to their interests.
>
> Foul-brood is becoming more and more wide spread, and like pleuro-pneumonia in cattle, sooner or later will be past control.
>
> We are willing to work, and are bending every energy towards laws that will be to the benefit of bee-keepers, and should we fail, it may be partially attributed to apathy and unconcern on the part of bee-keepers themselves.
>
> There must be some pressure brought to bear upon any subject, before the law-makers will take action, and we trust this will be a warning to the fraternity, and that they will act accordingly.
>
> The $5,000 appropriation for the World's Columbian Exhibition has not been reported by the committee as yet, and probably will not be, and it, with that of many other bills, will go into the general State exhibit. By the defeat of the Merritt Bill, it now looks as if the Illinois State Agricultural Society will have control of the Exposition, and the Secretary of that institution, and one of its members, have promised me a just allotment, and are anxious to see us well represented; but it looks now as though no special appropriations will be granted to any industry.
>
> As regards the $500 appropriation for publishing the bee-keepers' report, it reçeived some antagonism in the Committee on Appropriations, to which it was referred, but it came out with a respectable majority.
>
> The grounds upon which its enemies instituted a warfare were, that the State has no right to foster these institutions, and that they should stand upon their own resources, etc., and my argument to offset this was, that we are a part and parcel of the State, as well as the Dairymen's Association, Horticulturists, Agriculturists, etc., and that, as the State had granted them the privilege of publishing their reports, why not us?
>
> The Fruit Bloom Spraying Bill has been advanced to a third reading, and may pass the House soon. There were some committee amendments, but they do not alter the nature of the bill.
>
> J. M. Hambaugh.
>
> Springfield, Ills., May 12, 1891.

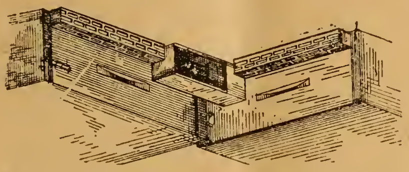
We have done all we could to create that "pressure" upon the committee, not only through the columns of the Bee Journal, but also by private letters written to each member of the committee, and to our Senators and Representatives. If the desired apicultural legislation is not obtained, after all that has been done by our apiarists in the Legislature and a few outside, who have spent much time and labor in working for the interest of the pursuit, one consolation is certainly left us—our duty has been done, and the fault will be honestly chargeable to the apathy of apiarists themselves.

* * *

In England there are some who imagine that bees are a nuisance, and have made it uncomfortable for neighboring apiarists. One case is mentioned on page 201 of the *British Bee Journal*. Three unfriendly neighbors are trying to get the bees removed, on the plea of the bees being "a nuisance," though it is not claimed that any one has been stung, or that any injury has been done by the bees. It is purely spite work, and, like some cases now receiving the attention of the Union in this country, grows out of some unfriendliness about politics or religion.

Hiver and Drone-Trap.—Mr. N. C. Petrie, of Cherry Valley, O., has obtained a patent on a new hiver and drone-trap, one of which is sent to our Museum. Mr. Petrie says:

> Its special object is to direct a swarm of bees into an empty hive. The attachment is hung on the hives by hooks secured to the upper side of the device. It is an elongated L-shaped box, with openings in the end, and deflecting cages or guide ways laid from the openings. These guide ways are made of zinc, perforated, the perforations being of a size to permit the workers to pass readily therethrough, but pervents the escape of the queen and drones. The guide ways are entirely open on the sides adjacent to the hives, so that the bees may freely enter, and by them be directed into the attachment. They may be also open at the bottom to affect an economy of material, the ledge of the hives preventing the bees from passing. The front and left sides are covered by wire screening, so that the movements of the bees may be observed.
>
> The main idea of our swarmer is to allow enough workers to accompany the queen to induce her to remain in the new hive, and we think that our swinging partition will allow three times as many bees to accompany the queen as can go with her by using the cone.
>
> The swinging partition is hung from the top of the box, and is met about two-thirds of the way by an elevated platform or step, which reaches to within ⅛ of an inch of the bottom of the partition or gate, leaving room for a worker to get under, but forcing the queen or drone to swing it inwardly. It is prevented from swinging outward by a staple in the top of the box inside.



◆

Queen-Cell Protectors are received from N. D. West, Middleburgh, N. Y., for our Museum. They will be illustrated and described next week. The engravings came too late for this issue. See page 684.

Hopkins, Mo., has had an attack of the "nuisance" fever. Mr. J. C. Stewart, who kept bees there, sent us a copy of the "ordinance," and writes thus:

> I have engaged a new location three-quarters of a mile out of town. I could have located on the edge and given some of the parties who fought the bees more trouble, but I will not do that. It was the bees' spotting the clothing, which decided the board.
>
> I told them if such a law should become extensive, it would crush the industry. The drouth last season was another factor against the bees. I thank you for your interest shown. Never saw better prospects for a crop of honey. I have six frames of brood per hive.
>
> J. C. STEWART.

This ends the trouble without appeal to courts of law.

◆

Duty on Queens.—On this subject Prof. Cook wrote us as follows on May 11, 1891:

> DEAR FRIEND:—I have a letter from Secretary Foster, of the Treasury Department, that he cannot make a decision to receive queen-bees free of duty, except as the requisite certificates are secured and presented. This is too bad! Now, we ought at once to find out just what an importer must do to be relieved of that duty, that the matter may be made plain and as easy as possible. I believe, were I to go to Washington, I could secure a different ruling. Perhaps I might go in August.
>
> A. J. COOK.

We urged Prof. Cook to go to Washington at once to attend to the matter, but he writes thus:

> I could not go to Washington now, but could go in August (about the 15th). I believe I could convince the authorities that they would be justified in ruling that queens are an exception, and so we may be all right for next year. It is too late anyway for this season.
>
> A. J. COOK.

The matter will now have to rest until August, when Prof. Cook will make a personal appeal to the Secretary of the Treasury, to place queen-bees on the list of exemptions from Customs duties.

The Union.—Mr. E. France, of Platteville, Wis., writes us as follows, and propounds several questions:

Mr. Newman:—On page 567 of the American Bee Journal you say: "On one thing Mr. France is in error. The officers of the Union have been made the members of the Defense Committee of the North American Bee-Keepers' Association, and in that way the two organizations are 'united,' and act in *harmony*, but yet they have independent management, and different Constitutions and By-Lays. This is the only kind of 'union' which we think could be considered, and which would be mutually advantageous and agreeable."

I would like a little explanation. Does the North American Bee-Keepers' Association have a defense fund of its own to defend its members, or do they draw from the Union Treasury to defend its members? In what way do they harmonize together? I do not see the point. Please explain. E. France.

No one is entitled to be defended by the Union but its members, and no one can draw upon its Treasury but its regular officers, and they only for the defense of its members and the legitimate expenses attending the same. The By-Lays of the North American Bee-Keepers' Association reads thus:

Article X.—A Defense Committee of seven shall be appointed for the purpose of considering the applications of members for defense from unjust lawsuits by those who are prejudiced against the pursuit. This committee shall be the officers annually elected by the National Bee-Keepers' Union, which is hereby declared to be affiliated to the International American Bee-Association. Its President is hereby made a Vice-President of this Association, and its General Manager also a delegate to the International Convention.

The "union" of these organizations is solely for moral effect and influence, and not for financial reasons. The North American Bee-Keepers' Association recognizing the good work of the Union, says to it, "Well Done," seats its President and General Manager as officers of the Association, and forms the seven officers of the Union into a Defense Committee. In other words, it takes the Union under its protective care, and confers upon it all the respect, influence and dignity at its command. No greater honor could it bestow!

◆

An Association of the bee-keepers in the Shenandoah Valley, Va., has been formed, and two meetings were held in Staunton, Va., to perfect the organization. Mr. David O'Rork, of Staunton, was elected President, and Mr. J. M. Steffey, Secretary. Those present represented 800 colonies of bees.

The Shenandoah Valley is one of the best locations in the world for bees, and should have a strong association.

At the last meeting there was an interesting discussion and comparison of experience in bee-keeping, after which the association adjourned until the fourth Saturday in May.

Concerning this organization, Mr. Joseph E. Shaver, of Friedens, Va., writes us as follows:

The bee-keepers of Virginia are beginning to see to their interest in the pursuit of apiculture. It will not be long until the keeping of bees in logs and nail kegs will be a thing of the past. If bees are worth keeping, they are worthy of careful attention. Bees have done well this Spring on fruit bloom, but for the last few days the weather has been quite cool, and bees could do nothing. In a few days, if the weather turns warmer, the locusts will bloom, and swarming will be the order of the day. We hope to have a good honey season, as we have had several failures. White clover stands well on the ground, and if the season is favorable, it will yield a large crop of honey.
Joseph E. Shaver.

Organized work will accomplish considerable in the line of educating the unprogressive bee-keepers of any locality. We wish the organization above mentioned much success.

◆

Favorable Outlook.—Mr. H. B. Tickemyre, Shackelford, Mo., writes:

My bees are in good condition, and everything looks favorable for a good honey season in this locality.

Queries and Replies.

Do Honey-Boards Affect the Surplus?

QUERY 767.—1. In the production of extracted-honey, supers of empty comb being used to receive the surplus (other conditions being the same), will as much honey be stored when queen-excluding honey-boards are used as when they are not? 2. Will their use increase swarming, provided large brood-chambers are used?—R. P.

1. No. 2. No.—J. P. H. BROWN.

1. I can see no difference. 2. I do not think so.—A. J. COOK.

1. About the same, I presume. 2. Probably not.—M. MAHIN.

1. Yes; more. 2. I prefer plenty of room in supers.—A. B. MASON.

1. Yes. 2. The use of these will tend to increase swarming.—G. M. DOOLITTLE.

1. We do not advise the use of queen-excluding honey-boards. — DADANT & SON.

1. The difference, if any, would be very slight. 2. I think not.—MRS. L. HARRISON.

1. I do not know. I do not use them. 2. I think so, to some extent.—J. M. HAMBAUGH.

1. Yes; I have experimented a great deal, and find no difference. 2. No.—C. H. DIBBERN.

1. I think so. 2. Their use would have some tendency to increase swarming.—R. L. TAYLOR.

1. I have found no difference, but my experience is too slight to be of value. 2. I think not.—J. E. POND.

1. Yes; I think fully as much. 2. With large hives I do not think it will make any difference.—H. D. CUTTING.

1. I think so—nearly. 2. Possibly; unless the extracting super is kept well emptied. In that case I do not think they will.—EUGENE SECOR.

1. Yes; but it will have to be admitted that a wood-zinc queen-excluder, made up in the usual way with one-rowed zinc, not only lessens the amount of honey stored above it, but also interferes with the ripening process. In other words, a queen-excluder to be serviceable, must have from 350 to 500 perforations of the usual size. 2. No; nor with small brood-chambers, either, if properly managed.—G. L. TINKER.

1. There may be a little difference, but I do not believe it amounts to much. 2. I think you will have more swarming than if the queen has free play.—C. C. MILLER.

1. Yes; as I have proven by careful experiment. 2. Yes. Colonies will be more apt to swarm than where the queen has access to and places brood in several chambers.—JAMES HEDDON.

1. I get better yields by their use, because no brood is present to take up the room that should be filled with honey. 2. I use the full sheets of perforated zinc, framed with wood, in preference to the wood and zinc honey-board, because they cost me less and give better ventilation, and are easier cleaned. The way I use them they do not increase swarming. In fact, I control swarming, in a great measure, with them.—G. W. DEMAREE.

1. There will be but little difference, if any, in the quantity of honey stored, whether queen-excluding honey-boards are used or not. 2. While the tendency may be to a slight increase of swarms, there would probably be so little difference that it would be a hard matter to decide with any degree of certainty.—THE EDITOR.

Bees on Shares.—A correspondent asks us to answer the following question in the BEE JOURNAL:

Last year I left my bees with a friend, to be taken care of for a share of the honey; but it was a poor year, and no surplus was obtained. This year the same party has the care of them again; should he have a larger share of honey because of the poor season last year?

MINNESOTA.

Legally your friend could not claim any more than the share agreed upon between you. But as he took care of them—probably fed them and prepared them for Winter, and thus preserved your property, when it was unproductive—equity would suggest that you recognize his work by *giving* him an extra amount this year.

Topics of Interest.

Entrances, Ventilation, Etc.

G. M. DOOLITTLE.

A correspondent asks me some questions, and says, "Please answer through the AMERICAN BEE JOURNAL." He first wishes to know if two or more entrances are not needed in a hive during the Summer months: "One for the main or front entrance, and one at the rear for ventilation, to be opened during hot weather."

Regarding ventilation, I would say, that I much perfer to make the main entrance large enough to give all the needed ventilation in times of extreme heat, and have it so arranged that it can be easily contracted to meet the requirements of even the smallest colony, when desired.

My reasons for so preferring are, that unless the rear entrance is closed during cool nights, it makes the hive so cool, by the draft of air, that the bees cannot work to advantage at brood-rearing, comb-building, drawing out comb-foundation, or evaporating nectar; while to open and close any entrance or ventilator every night, or every time the weather changes, is out of the question, except by a person who has the "bee-fever" bad, or a very few colonies. If a person tries such a thing when they first start out in bee-keeping, it soon becomes an old story, when the extra entrances are neglected, and often causes robbing in times of scarcity, if all are left open.

But the worst part of all is that the bees get in the habit of using the back ventilator as an entrance where it is left open all the while, as it usually is during the latter part of Summer, so that when it is finally closed, the bees which have been accustomed to use this as an entrance to the hive, go out of the regular entrance, but return to the old place, only to find it closed, thus causing their loss, as they know no other place of getting into their home, having so marked on their first flight.

He next wishes to know if it is not necessary to have an entrance near the top of the hive, which is to be left open all the while when the bees are storing surplus honey, "so that the bees need not have to travel so far, as they must of necessity do where they have to carry the honey all the way from the bottom entrance to the top of a two or three-story hive."

It is evident that our friend is laboring under a mistaken impression, and by arguing that such an entrance is a necessity, admits his lack of a thorough knowledge of the inside workings of the hive. The bees which gather the honey are not the ones that deposit it in the cells, as I have several times proven by taking away a queen of one variety of bees and introducing a queen of another variety. For instance, I once took away a queen of a black colony during the month of June, and noted the time the last black bee hatched, and also when the first Italian emerged from her cell.

As young bees do not gather honey until they are 16 days old, when the colony is in a normal condition, if we watch that colony on the fifteenth day in the forenoon, before the young bees go out to play (counting from the time the first Italian hatched), no Italians should be seen going in and out at the entrance, but all should be black bees.

In looking at the entrance on the day named, I found only black bees at work, as I had expected, but an examination of the sections, in which the bees were briskly at work, showed scarcely a black bee in them, but all were Italians, which were busily employed building comb and depositing honey. Now, if, as our friend supposes, the field bees carry their loads of nectar and deposit them in the cells, why were not some of those black bees seen doing this, as there were multitudes of these coming in from the field all the while with large loads of nectar.

Again, for several years I used an observatory hive, containing but one comb, and many were the hours I spent in watching this to see what I could find out about our pets—what they usually did "in the dark." During one of my experiments with this, I had black bees as field bees, and young Italians for the inside work.

By watching the entrance through the glass, I could see the loaded black bees come in, and when one came on the side next to me, I could easily see what it did with the load of honey it had. The bee would pass along on the comb until it came to a young bee, when it would put out its tongue or proboscis toward this young bee. If this young bee had no load, it would take the load, when it was given up to it.

If the light was just right I could see the nectar sparkle as it passed from one to the other, on or through their tongues. The field bee then rested a little while, when it would go for another load. Thus it will be seen that any entrance leading directly to the surplus arrangement (as was quite generally used years ago, and is now used by a few), is of no use, but on the contrary a positive damage, as in cool nights it causes the bees to leave the boxes or sections, from allowing too much cool air to enter them.

To secure the best results, we should acquaint ourselves with all the minutia of the work of our pets; then we will know whether what we propose will bring us the best results, or prove a disadvantage to us in securing the most honey and money for our labor.

Borodino, N. Y.

Importance of Young, Vigorous Queens.

E. L. PRATT.

It is very important that every colony in the apiary should have a young and vigorous queen at its head, for on the queen depends the best results in bee-keeping.

I am not an advocate of killing queens at two years, or even three years of age, if they are doing good work.

The bees will generally attend to the superseding business; but they cannot always be depended upon. Therefore, a record of each queen should be kept on each hive, so that one can know the exact age of each queen, when examining the hives at any time.

If bees tolerate a slow-laying queen, and are loth to supersede her, one has only to refer to his record for the why and wherefore. If such a colony is found, there should be no delay on the part of the apiarist in supplying a new queen.

The simplest and most natural manner of changing the queen is to slip in a cell from one of the best colonies in the apiary 25 hours after the old queen has been taken away.

If none but the best drones are allowed to fly during the mating season, all the young queens will meet with selected stock. This can be accomplished by the use of a trap having perforated metal large enough to pass a queen, yet small enough to exclude the drones.

It is important to introduce queens from a distance at least once a year. By breeding in new blood occasionally, the standard of the bees will be gradually raised, if the breeder of the queens has good stock, and is an experienced man in this particular branch of our industry.

Beverly, Mass.

Missouri State Bee-Keepers' Association.

W. S. DORN BLASER.

The Missouri State Bee-Keepers' Association held their fourth annual convention in Boonville, Mo., April 9 and 10, 1891.

MORNING SESSION.

The convention was called to order at 9:30 a.m., on Thursday, April 9, President R. B. Leahy in the chair.

On roll call, 12 of the 88 old members answered to their names.

New members—J. B. Stanclift, Andrew McNish, L. Z. Angest, Mrs. J. G. Banning (honorary), Brookfield; John Conser, J. M. Mason, Sedalia.

The appointment of committees was, on motion, postponed until 3 p.m.

The Secretary's report was read, and, on motion, received, and his account allowed.

The following essay by E. R. Garrett, of Appleton City, was read:

Should Bees be Taxed?

Yes, and the heavier the better for the practical apiarist. This is a subject of great importance, as money is the center of every occupation in life. There is nothing worth having that can be had without this most powerful of all earthly interests.

I was forcibly impressed with this thought by a question asked in *Gleanings* of Jan. 15. There seems to be selfishness about this thing. The apiarist would seek help from the Government, and, from the answer, I infer that the Government is seeking its own interest. Is it possible that our favorite pursuit is one upon which our Government has no claim? It claims an interest in our horses, cattle, hogs, sheep, etc., but places no value upon the bee. And when we ask its consideration of this industry, it treats the subject with lightness, as I judge from the remarks of "Rambler" and Mr. Heddon.

Now, I do not propose to treat this subject wholly upon philanthropic principles, but upon principles of self-interest. Every year the assessor comes to us with his list. He wishes to know our worth in personal property; how many head of cattle, horses, etc., we have, and then, wishing to be as liberal as possible, he asks if there is any other personal property not mentioned in his list. Our conscience smites us, as we evade a direct answer; for by common law bees are taxable property, but by common consent they are not, and we are not benevolent so much as to pay taxes unless our neighbors are so minded.

I have seen boys positively refuse to pick up chips for their mother unless their little brother or sister would go with them and help, and when at the chip pile they would insist on their little brother or sister picking up all the chips, and then carrying them to the house.

Our neighbors become much interested in apiculture when it does not cost them anything, and especially so during a good flow of nectar. Everybody wants bees, but it will not pay everybody to keep them.

Apiculture is a profession in which success depends not only upon hard study, but a natural gift and a natural love for the little creatures. Still, they invest and flood the country with useless bees, overstocking the pasturage, and spoiling the home market by selling their honey at the stores for just what they can get—8 or 10 cents for section honey.

Some sell honey with mashed up comb that brood has been reared in, perhaps, for many years; and I find people that think honey is honey whether it is mixed up with brood-comb or in new, nice, clean section comb. This is discouraging to the experienced apiarist who is spending his time and money in trying to build up a respectable business, is losing precious hours of sleep by hard study, and is often defeated in his plans.

Our meat markets, without protection, would be treated with the most shameful contempt, and we would be compelled, under the circumstances, to eat poor beef. The grocery stores would smell of bad beef, as their honey cans now smell of poor honey.

Self-interest, actuated by purely selfish motives, is wrong. As Americans, we are moved to a desire to advance our own interests, as it was with the Medes and Persians of old. Humanity is full of purely selfish motives. Like Cain, they forget their own calling, and each views his fellows' occupation with covetous eyes.

But when self-interest is actuated by social motives, it is a benefit, and this is the greatest interest, both to the individual and his neighbors. Self-interest, as it relates to social economy, is right. The butcher pays a tax, and that is used for the good of the community, and the community protects him in his business. Taxes levied from purely selfish motives are wrong. Whenever the produce of a tax is used otherwise than in the service of those who pay it, the tax is unjust, and should not be tolerated. Our commonwealth is not like a selfish monarch, but provides the best interest to its adherents in their respective pursuits. The tax we pay is used for our benefit.

We need Government, and without it a hasty return to barbarism would be the inevitable result. The Government participates in all production, and is as much a factor in this creation of wealth as land, labor or capital. Therefore, it is a factor in the production of wealth. It is entitled to a share of the wealth produced. We pledge our possessions to support those whom we elect to enact and execute our laws. The Government in return pledges us protection.

We conclude then, that taxation is not of itself an evil, but a blessing; and I think if bees were taxed, the Government Experiment Station would be as liberal in this pnrsuit as they are in every other pursuit. Then we would be entitled to our representative, and thus avoid the fears of Mr. Heddon and others, and apicultnre would become a pursuit into which the Government would delight to look, and for which it would afford protection.

E. R. Garrett.

G. H. Ashworth thought it perfectly right that bees be taxed.

W. S. Dorn Blaser thought the industry could not receive proper attention from State and county authorities unless bees were taxed.

John Conser thought it would be satisfactory to have bees taxed, and beekeepers would feel more independent.

R. B. Leahy would like to see bees taxed at a given rate per hive.

G. P. Morton did not know whether bees ought to be taxed, or not considered as property; let the Government take the lead.

After further discussion the question was referred to the Committee on Resolutions.

On motion, a question-box was established, and the President appointed as a committee to answer questions, John Conser, G. H. Ashworth and E. R. Garrett.

The following essay was read by G. H. Ashworth:

Queen Restrictors.

I believe that I agreed with Brother Rouse that I would say something on the subject of queen restrictors, or as I have named my device the "'Queen and

Swarm Controller." Experience has taught the observing bee-keeper that it is necessary to reduce and control the amount of brood in the colony just on the eve of the honey-flow, and I find by the use of the queen and swarm controller, that we can hold a colony on comb-honey more successfully than by any other method yet tried, and by giving the queen worker-comb in the controller, we can reduce the drone progeny to a very small per cent., and for extracting it certainly is just the thing that we all want.

You have no brood in the comb, and but very little pollen; having the queen and brood in the center of the hive, we have pure honey on each side, and no queen to look after. But one colony out of twelve attempted to swarm, and the bees returned to the hive and went to work in earnest. Average 76 pounds comb-honey for the twelve thus handled.

G. H. ASHWORTH.

The subject was discussed at some length, and condensed by Mr. E. F. Quigley as follows: "As I understand the opinion of the convention, it is decided that too much metal in the hive is undesirable, and that there is danger of losing the queen by superseding if restrictor is used too long.

Question—What are the best methods of handling bees for comb-honey, with no increase?

By controlling queen-space, giving the queen just as much room as required for laying.

Question—What effect will it have on swarming to exclude all the drones from the hive?

It will tend to discourage swarming.

Convention adjourned until 1:30 p.m.

AFTERNOON SESSION.

The convention was called to order at 1:45 p.m.

An essay on Economy in Bee-Keeping, by S. Brantigam, was read by the Secretary, as follows:

Economy in Bee-Keeping.

Why use economy in bee-keeping? Because economy bears interest, and a person once knowing the value of it, will never do without it. For economy avoids all waste and extravagance, and applies money to the best advantage. To be economical, is to save unnecessary expense and waste.

How, when and where to use economy, is a question which must be considered by the apiarist or bee-keeper. Use it at the proper time by ordering your supplies in ample time, so that you may have everything ready and handy when your labor is wanted in the apiary.

By using the best hive for all purposes, by having young queens, by good management in breeding up in the Spring; saving all the scraps of wax, which will amount to quite a little bit for the time it takes to save it; doing your work neatly and well; using full sheets of foundation at the proper time; having your sections neat, clean, and well filled; taking good care of your combs during the Winter, and by wintering your bees well, with the least expense.

Also by having a work-shop, with sufficient room to work in, located at the most convenient place at the apiary, and by using your own judgment, and not the supply dealer's, for the supply dealers want to dispose of anything they have in the line of hives and fixtures; and a practical apiarist will never buy what the supply dealer wants to force on him, but will buy what he knows is best—which he knows by experience.

A rigid economy is demanded in bee-keeping, as in most other occupations. Nothing must be allowed to go to waste; all fragments must be utilized; such as pieces of wax, comb, refuse honey, etc. Time is also a very important item. Another item that is often overlooked by the owner of bees, is the kind of help they employ in their apiary. If you have more bees than you can manage yourself, it will pay you well to hire a man to take charge of your apiary; one who is well posted in bee-keeping, and has had experience.

A great many imagine that any person can manage an apiary, and because they can get them cheaper, they think they are saving money by employing such, but they will soon discover that an inexperienced person is only a detriment to them.

A good, sober and industrious apiarist will demand good wages and good treatment; for he knows what his labor is worth, and if the owner of the apiary knows what he is doing, he will never put an inexperienced person in charge of his apiary, because he will do more harm than good. As to the details of economy, each apiarist must be his own judge.

SIGEL BRANTIGAM.

The subject was discussed at some length by Messrs. Conser, Leahy, Garrett, Morton, and others.

A selection, "Difficulty in Rhyming," was read by W. S. Dorn Blaser.

Is Bee-Keeping a Suitable Occupation for Ladies, was the subject of an essay by Mrs. J. M. Null, of Miami, Mo.

Mr. Redmon, of the *Republican*, in behalf of the Mayor and citizens of Boonville, welcomed the association in an earnest address, which was responded to on behalf of the association by W. S. Dorn Blaser.

What position does the supply dealer occupy in apiculture; is he a benefit and a necessity? was the subject of an essay by W. S. Dorn Blaser.

After a brief discussion, a recess was taken for 15 minutes, after which the President appointed the following Committee on Resolutions: Mrs. J. M. Null, W. S. Dorn Blaser, G. P. Morton.

Question No. 3 was taken from the box:—How many can recommend the progeny of the golden Italian queens as workers?

The committee was divided as between leather-colored and golden, and the question was left to the convention; four voting for leather-colored, and one for golden; balance not voting.

Question—Has any one had experience with closed-end or fixed frames? If so, what is it?

Two say "no;" one says they are recommended for out-apiaries in moving. The question was discussed at some length, and discussion condensed by W. S. Dorn Blaser as follows: They are desirable for out-apiaries, moving and comb-honey, but undesirable for extracted-honey.

A communication from the Turkey Hill Bee-Keepers' Association was read, asking this association to memorialize the St. Louis Fair Association on the question of premiums and exhibit space.

On motion, the communication was referred to a committee of three, for examination, correction if necessary, and report, with a memorial.

The President appointed C. F. Barham, John Conser, and W. S. Dorn Blaser, as such committee.

Question—How can we make the exercises of this convention interesting?

By being interested, and by each one taking an individual part and interest in the discussion of the questions presented.

Question—What is the best kind and size of sections; also the best size and shape of foundation to put in the same to insure well-filled sections and straight combs.

One-piece sections, 4¼x4¼x1¾, well filled with foundation.

Question—What effect will a caged queen have on the storage of honey?

To cage a queen will reduce the energy of the colony, unless released five or six days after taking away the cell.

Adjourned until 7:30 p.m.

EVENING SESSION.

The convention was called to order at 7:30 p.m.

The Hive I Use and Recommend, was the subject of an essay by G. P. Morton.

The question was briefly discussed, and was followed by an essay by R. B. Williams, of Winchester, Tenn., on

Natural or Artificial Swarms.

Having had from 25 to 140 colonies for the past twelve years, and having had considerable experience in artificial swarming, I have long since abandoned it. I consider it unprofitable, compared with natural swarms.

Nature has so nicely arranged her laws that they are very hard for man to equal: and especially is this true with the bee-swarm. When a swarm issues, it seems to be a perfect May day picnic to all hands, and puts new life in the whole colony immediately after they have been hived, and all go to work with a vim. I have never seen the work of a prime swarm equaled by an artificial one, no matter at what time it was made, nor how strong in bees.

Have you not noticed the inactivity of an artificial swarm for several days after it was made—they are slow to begin work. I have made artificial swarms at the same time that I had natural swarms, and in every instance the natural swarm out-stripped them in gathering honey, as well as in brood-rearing and comb-building. With me the natural swarm has proved the most profitable. I have tried making artificial swarms from colonies that had made all preparations for swarming. Have taken as much as two-thirds of the bees, and given them the old queen, and in no instance did they give the result that they would have given if left alone.

I would perfer a weak natural swarm to a strong artificial one. Perhaps some have been more successful than I have been. In breeding queens for the market, of course, we are compelled to make small artificial swarms. We are then working for queens, and not for honey or increase. This is the only way I could be induced to divide a colony until after it had swarmed. I then remove the old hive and put the swarm on the old stand, remove sections from the parent hive, and place on a new hive; or, if working for extracted-honey, I place a second story, containing combs, on the new hive the fifth day after the swarm has been hived.

By waiting four or five days, the queen has commenced to deposit eggs in the new comb as it is built. By working this way the queen will rarely ever go above. If you use an excluder, it is better not to place the second story on until the second or third day. Seven or eight days after the swarm has issued, I remove all queen-cells except one, thereby putting a stop to further swarming.

The old colony treated in this way, always builds up in time to be ready for the basswood bloom, and very often yields quite a nice lot of comb-honey. If by chance the swarm is a late one, they will be in good condition for wintering well. R. B. WILLIAMS.

Question—What time of year is it best to ship comb-honey?

In October or November, before cold weather, when the price suits.

Question—Shall we contract hives in the commencement of the honey season, when we get surplus from Fall flowers?

No. Let the bees have late crops for Winter; give the queen room, to keep down increase.

Question—Are we ready to throw aside the break-joint honey-board?

Two say, no; not so long as we have burr-combs to contend with. One says, I have no use for them.

Selections, "My Garden," and "Mary's Little Lamb," were read by W. S. Dorn Blaser.

The convention adjourned until tomorrow morning.

SECOND DAY—MORNING SESSION.

The convention was called to order at 9:15 a.m., and the World's Fair was discussed at length.

On motion, a committee of two was elected by the association, to use their best efforts with the World's Fair Commission of the State Legislature, with a view to securing an appropriation of not less than $5,000; the association to pay the committee's expenses to Jefferson City, if necessary, and the committee to report at the next meeting.

From the number placed in nomination, Mrs. J. M. Null, of Miami, was elected on the second ballot, and W. S. Dorn Blaser, of Higginsville, on the fourth ballot.

On motion, the selection of the place for holding the next meeting was made a special order for 1:30 o'clock, after which a recess of 15 minutes was taken.

After recess, the Secretary read an essay by P. Baldwin, of Independence, on the subject, How can we increase the membership of our association, and make it so interesting as to insure its success.

It was decided, after considerable discussion, to invite exhibits of apiarian implements and honey at future meetings.

Adjourned until 1:30 p.m.

AFTERNOON SESSION.

At 1:30 the convention was called to order, and the special order taken up. Sedalia and Appleton City were named, and the ballot resulted in favor of Sedalia, by 24 to 3, and the selection was made unanimous. The time for holding the next convention will be between Oct. 10 and 20.

On motion, the President appointed, as a competent member to deliver a lecture to beginners, at the next meeting, G. P. Morton.

An essay on My Idea of a Bee-Convention, by A. O. Calhoun, of Victor, was read by the Secretary.

W. S. Dorn Blaser then read a selection entitled, "The Closing Business," and a recess of 15 minutes was taken.

Resolutions were adopted, thanking the citizens of Boonville for their hearty welcome, and open-hearted hospitality; the county authorities for the use of the court house; and the newspapers of Boonville for their kindly interest in publishing the proceedings.

It was also resolved that the association, as a body, and the members as individuals, should use every effort to secure an adequate appropriation for a creditable exhibit at the World's Fair at Chicago.

The association, by resolution, favors the taxing of bees by State and county authorities, the "basis of taxation to be the actual value of a colony of Italian bees on June 1."

There being a bill pending before the Missouri Legislature, "forbidding the manufacture and sale of all vinegars, except pure cider vinegar, which, if passed, would debar the apiarist from making vinegar from the odds and ends of his apiary," it was resolved to use all means in the power of the members of the convention to have honey vinegar included in the bill, as they deemed it the finest and purest vinegar made.

The committee appointed on the communication of the Turkey Hill Association reported a resolution to the effect that it was due to the interests of the State at large, and the industry of apiculture, that the St. Louis Fair Association should encourage apiarian exhibits by providing a more suitable and extensive place therefor, and offering premiums in proportion to the magnitude and importance of the business. They also suggested the following list of premiums for the consideration of the officers of the Fair Association, and that the awarding committee be composed of practical bee-keepers, of at least five years' experience :

PREMIUMS.

	1st.	2d.
Best sample of Italian bees with queen, two frame nuclei	$40	$25
Best sample of Carniolan bees with queen, two frame nuclei	40	25
Best collection of Italian queens, alive	20	10
Best collection of Carniolan queens, alive	20	10
Best bee-hive for all purposes, made by exhibitor	50	30
Best specimens of comb-foundation made by exhibitor	20	10
Best crate of honey in comb, not less than 12 lbs., produced by exhibitor	30	15
Best specimen of extracted-honey in glass, not less than 12 lbs., produced by exhibitor	30	15
Largest and best display of samples of comb-honey, of different kinds	50	30
Largest and best display of samples of extracted-honey, different kinds	50	30
Best specimen of beeswax	5	2
Largest, best, and most attractive display of honey, all kinds	50	30
Largest, best, and most attractive display of apiarian supplies, made by exhibitor	50	30

DIPLOMAS.

Best comb-foundation machine.
Best machine for piercing frames.
Best wax extractor.
Best bee-smoker.
Best honey knife.
Best shipping crate.
Best queen-cage.
Best bee-veil, or face protector.

The question-box was then emptied, and each question answered.

Diseases among bees were discussed, after which the convention adjourned to meet in Sedalia, in October.

Higginsville, Mo.

Getting Used to a Thing.

E. R. ROOT.

While Mr. John H. Larrabee, of Vermont, was visiting us a few days ago, we talked over a good many things, old and new ; and more than once we fell to wondering why it is that bee-keepers disagree so much as to the implements they would use.

Brown could not be induced to make even a trial of closed-end frames ; and Jones has no sympathy with a man who will use loose swinging frames. Neither one can understand how the other can tolerate such awkward things. While these thoughts were passing between us mutually, "genial John" made this pertinent remark : "I tell you, Ernest, there is a good deal in getting used to a thing."

"That is just it exactly," I replied. "How many times I have thought that these differences of experience, and differences of opinion in our fraternity are explainable by just this fact : 'There is a good deal in getting used to a thing.'"

I further told him that I thought a good many would not use fixed distances simply because they would not have patience to learn how to use them. Smith will try a few, and exclaim :

"There, that is just what I thought about them ! I am not very often deceived in my impressions. I have had long experience in the apiary, and I know exactly what the bees like, and what they do not like."

There are a good many such bee-keepers, and good ones, too, who, if they had a little more patience in trying some of these new-fangled notions, might save themselves a great deal of extra work. I have no doubt there are some who will give a little trial to the Hoffman frames, and then make a remark similar to the one just given. Why, the fact is, Mr. Hoffman manages 600 colonies on his frames, practically alone ; and he says himself that he could not handle half that number were they on ordinary hanging frames. What I saw in his apiary, I think, abundantly bears out his statements. If what Mr. Hoffman says is true, can these bee-keepers afford not to give fixed distances a fair trial ?

The other day I was talking with a bee-keeper who said, "Now, there are those bee-escapes you fellows are making such a big fuss about. I tested them a little bit last Summer, and it is just as I expected. I could not make them work."

"Why," said I, "you do not know how to use them. It is all in getting used to a thing, you know. Why ! Manum takes off a whole crop of comb-honey with them, in a couple of hours' time, and that, too, from a whole apiary of 100 colonies ; Boardman, over here at East Townsend, O., has used them for years, and he is one of those bee-keepers who will not use a thing unless it is of real, substantial service in the apiary. Reese and Dibbern are both honest men, and I think they are honest and fair in their statements. Do you set up your opinion against them when you have given the escapes only just a little trial, on two or three hives? It is all in getting used to a thing, you know."

About six months ago I ran across a man who was using the Clark smoker. He had tried the Bingham, and, "ugh, ugh!" he would not use one; but the Clark suited him perfectly.

"Look here, my friend," said I, "I like to hear you praise the Clark smoker; but there are thousands and thousands who use a Bingham who would not use a Clark. Personally (and I have used the Bingham quite a little, too), I think it is an excellent smoker, and there are times and places when I should much rather have it than the Clark; and perhaps I may be pardoned if I say there are times when I prefer the Clark. You do not know how to use the Bingham. It is all in getting used to a thing."

A year or so ago, in an apiary where I was visiting, I observed a Stanley honey-extractor. "Hello, there!" said I, "How does it work?"

"Do not like it at all," said he. "It takes a barn to house it, and it does not reverse worth a cent. The baskets fly around and bang together, and the chains get all tangled up."

"Why, my friend, I replied, "I have been in apiaries where they were very enthusiastic over it. It worked just splendid. You have not learned the knack of reversing the baskets. I have had very little experience with the thing, but let me see if I cannot show you how those other fellows do." I grasped the handle, and performed the operation quite to my own satisfaction.

"But you have not got any combs in," said he.

"Well, put some in." But he did not have any handy. Said I: "It is all in getting used to a thing. If you reverse the baskets as easily as I, you ought not to have very much trouble."

Last Summer, and a year ago last Summer, I tried several times the shake-out function of the Heddon hive. It worked beautifully, so far as getting the bees all over the ground and up my trousers legs was concerned, and the queen could not be found. So far I cannot make it work.

If my good friend Mr. Heddon were here, he would, to use Mr. Larrabee's expression, say that it is all in getting used to a thing; and he would proceed to go through a tremulous motion that would leave you and I in no doubt whatever as to its successful working. Some day I hope to have the privilege of seeing Mr. Heddon perform that very operation—in a word, let him teach me how to get used to the thing.

It is all in getting used to a thing. "Look here, young Root," some of you will say; "that is not so."

Just wait a minute until I qualify. We cannot get used to a thing unless that thing has real merit. If good, competent bee-keepers acquire a certain knack, whereby they can shorten one or more days of labor in the apiary, then we can. We cannot explain away all these differences by locality. To be more fair, and to be nearer the truth, we should say we have not yet acquired the knack. Perhaps I cannot say, in every case, that it is *all* in getting used to a thing; but I will say there is a great deal in getting used to it.—*Read at the Ohio State Convention.*

Prevention of Swarming.

R. C. AIKIN.

When I began bee-culture, my location was such that I had no summer flow, and for several years my crop was all Fall honey. Lateness of season, cool weather, etc., at the time of honey-flow, influenced the bees, so that I could keep very strong colonies, and have little swarming.

Clover and basswood localities were always complaining: "Bees swarm right in the best of honey-flow." Later I had clover honey-flow, too; and then I realized the situation.

A September flow will cause less swarming, with one-half to two-thirds more bees per colony, than an equal flow in June. My own and others' experience proves to me that larger crops are obtained by not allowing swarming during the honey-flow.

A good colony, in a good flow, will bring in, say, 5 pounds of honey per day. That is just when the good colonies swarm, too. Fifty *good* colonies will cast 50 swarms, and lose 50 days' work at honey gathering, which, at 5 pounds per day, equals 250 pounds. At 10 cents per pound, you lose $25.

I once had a colony of aged bees—the cause being repeated failures in introducing queens—and when the honey-flow was on, I doubt if there was a bee in that hive under two or three weeks old; yet, more honey was stored in proportion to the number of bees, than by any other colony in the apiary.

What has all this to do with the prevention of swarming? Why, just this: If that little handful of old bees, perhaps one quart or three pints, with neither brood nor queen, could store 24 pounds of honey (which they did), why will not larger colonies yield almost, if not quite, a proportionate rate, under similar circumstances. Rendering a colony queenless during the flow, will give practically the same results.

A letter before me, referring to my article on page 576, says: "It makes me think you really have a plan that will prevent swarming," and further says, "Tell the readers of the BEE JOURNAL your plan."

Yes, I have such a plan. I borrowed it from P. H. Elwood and E. France, and expect to keep it until I can get a better one. I do not know who "invented" it. The plan is to remove the queen before the colony casts a swarm.

When the swarming time approaches, prevent the "fever" by curtailing stores (but be sure they always have enough), giving room, ventilation, etc. Sometimes it is necessary to clip cells. Before the flow, or at its opening, take away the queen, and at the same-time clip all cells started—even the cups containing eggs.

Nine days later, again clip all cells. Or, if you want them to re-queen, leave one cell. If you attempt this plan, *be sure* that your work is *well done*. Remove the queens from your apiary as above, and you have nine days without a swarm, devoted to honey-gathering. On the ninth day clip the cells, and you have them for the season.

Ft. Collins, Colo.

Apicultural Notes from Alabama.

EDWARD CLARK.

My first swarm issued on April 23.

Bees have been gathering honey and pollen rapidly for the last few weeks, which, I think, is from the huckleberry.

Horsemint is quite plentiful here, and the bees seem to like it pretty well.

The cold weather during March prevented the bees from breeding early, but they are booming now.

Bees have wintered fairly well in this locality. I lost 2 colonies by starvation.

I anticipate a good honey crop this year.

The season of 1890 was the poorest year for honey that we have had since I have kept bees.

The bees in this vicinity are all hybrids, and are kept in box-hives and hollow logs.

Nat, Ala., May 2, 1891.

Bee-Keeping in Northwestern Wisconsin.

STEPHEN ROESE.

Bees, in this section of the country, have wintered well, and the indications are favorable for a large honey yield the coming season.

I have now 35 colonies in good condition, and, having rented my farm, would like double that number to care for this season.

I had left 9 colonies on the summer stands, well packed overhead, but in single-walled simplicity hives. On April 12 I moved the remaining colonies into the open air, the mercury having risen that day to 65°, for the first time this Spring.

All of my bees, both in the bee-house and outside, have wintered remarkably well, as my loss has been only 2 colonies, by starvation. This teaches me another lesson—to prepare my bees for Winter early in the Fall, as I did last year.

The 2 colonies which died of starvation, were supplied with the usual amount of stores, but the number of consumers had not been taken into consideration.

With the exception of 3 colonies, all are strong, active, and healthy, with frames full of young brood. I united 2 weak colonies, and took the queen from one of them and gave her to a strong colony that was queenless, and they accepted her at once.

ABSORBENT PACKING.

I am in favor of forest leaves or shavings for overhead packing, for both cellar and out-door wintering, and think Mr. Marsh, of Scotia, Mo. (page 485), is out of the way in his assertion that "the absorbent man is not dead yet, and that he should be put to bed on a Winter night, under a wet blanket."

I have tried enameled cloth covering for Winter, without packing, to my sorrow, and found that the cold water had trickled down upon the bees.

I do not claim perfection in apiculture, but if I am not mistaken our most noted apiculturists—Prof. Cook, and Messrs. A. I. Root, Doolittle and Heddon—advocate absorbent packing.

I should like to see answered in the Queries and Replies, the question, "Which is best for wintering bees; absorbent packing or enameled cloth cover," and if the masters of the art have changed their opinions on this subject, we want to know it.

Maiden Rock, Wis.

CONVENTION DIRECTORY.

Time and place of meeting.

1891.
May 26.—Cortland Union, at Cortland, N. Y.
M. H. Fairbanks, Sec., Homer, N. Y.

June 2.—Des Moines County, at Burlington, Iowa.
John Nau, Sec., Middletown, Iowa.

Aug. 6.—Rock River, at Sterling, Ills.
J. M. Burtch, Sec., Morrison, Ills.

Sept. 3.—Susquehanna County, at So. Montrose, Pa.
H. M. Seeley, Sec., Harford, Pa.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—The Editor.

North American Bee-Keepers' Association

President—P. H. Elwood....Starkville, N. Y.
Secretary—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

President—James Heddon ..Dowagiac, Mich.
Sec'y and Manager—T. G. Newman, Chicago.

Bee and Honey Gossip.

Working With a Vim.

Our rainy weather is over, and we are having splendid weather for honey gathering. Apple and huckleberry bloom are over, but they gave the bees a good start. Blackberries, raspberries, and the poplar are in bloom, and one can hear the bees roaring in the poplar from early morning until late in the evening, and it is a wonderful honey-producing tree. White clover is also in bloom, and my bees come in so heavily loaded that they fall by hundreds before reaching the hives. Prospects for a good honey harvest were never better within my recollection. The Italians are swarming, and I have 3 fine swarms working with a vim. John D. A. Fisher.

Faith, N. C., May 11, 1891.

Unsatisfactory Bee-House.

Heretofore I have been working in the railroad shops, and could not give my bees the attention they should have received, but this year I was obliged to stop working, and can spend my time caring for my bees. The house I have for the bees is too cold in Winter, and too warm in Spring, and I believe it is too near the street, for when a heavy wagon passes, the whole building is shaken. My cellar is dry, and I shall now line a part of it with matched lumber, and use it for the bees. My bees began breeding in January, but the hatching was not successful; and, besides, they have consumed most of their stores. Henry Bock.

Aurora, Ills., May 10, 1891.

Plenty of Brood.

Bees are doing finely—all the brood they can care for, and kept warm yet, either with chaff packing or warm quilting, after packing is removed. We are feeding the bees in both apiaries out-of-doors—or, rather, in warm, sunny rooms, with the doors open—on such days as they do not get much from fruit bloom, and it works very well, with no robbing. Mrs. L. C. Axtell.

Roseville, Ills., May 11, 1891.

Killed to Save Honey.

A neighbor of mine has a colony of bees that are dragging out the old bees, which seem to be blacker than the others, and very glossy. When they drag them out the old bees crawl around in the grass and die. What can be the cause of it? J. T. Wilson.

Pink, Ky.

[Old, glossy, or "shiny" bees are often killed off by the workers to save honey when it is scarce.—Ed.]

Gathering the New Crop.

Last Fall I had 100 colonies of bees. Of these I left 25 colonies on the summer stands, and 4 of those died, and the others are yet weak. The 75 colonies remaining, I placed in the cellar, and on April 17 they were taken out; 5 colonies were found dead, and a few have died since. Without examining them to see how much honey they had, I fed them all for ten nights, with sugar syrup. Within the last few days they seem to be bringing in some honey and a large amount of pollen. Have not unpacked those on the summer stands yet, as I do not consider them wintered—will report when I deem them safe. Have bought several colonies out in the country, but have not unpacked them yet, and will not until the freezing weather is past. Last Saturday night the weather turned cold, after a light rain, and ice formed

⅛ of an inch thick, which remained in shady places until noon on Sunday. I judge that bees are in fair condition in the country, as one man told me that his hives were filling up with honey lately gathered. O. R. GOODNO.

Carson City, Mich., May 4, 1891.

◆

Not Discouraged.

I lost both of my old, and one of my young colonies, but I am satisfied that they starved to death, as I looked at them a week or more after transferring them, and they seemed to be doing as well as could be expected. But I am not discouraged, for I like bee-culture, and have bought some more bees, which seem to be doing well. I have very large maple trees in my yard, and when a swarm issues they always cluster on the highest limbs, and it causes me a great deal of trouble to get them down. J. H. CALDER.

St. George's, Delaware.

◆

Care of Empty Combs.

How am I to keep the moths out of my empty combs? I suffered a heavy loss last Winter by my bees starving. I was not at home at the time I should have fed them in the Fall, and tried to winter through by feeding in the comb, which was so much trouble that I neglected them too long in March, and lost 14 colonies out of 21. Now that I have all those empty combs to take care of, I am afraid that, owing to the weak condition a good of them were in, that the millers got their work in. In fact, by examining the combs, I find some now. Will you tell me, through the BEE JOURNAL, the best way to preserve them; is there any way to kill the moths without injuring the combs? If the outlook was not so much like another poor season, I would buy some bees, as I could build up very soon—perhaps in time for them to make enough to keep them over Winter. We are having a cold, dry, backward Spring, with rather poor prospects for much white clover. D. STEWART, M. D.

North Liberty, Iowa.

[Some hang empty combs in hives, others store them in cellars, and still others put them into paper sacks. The best way is to box them. If there is any danger of their having moth eggs, of course they should be fumigated.—ED.]

Association Meeting.

The Susquehanna County (Pa.) Bee-Keepers' Association met at Montrose, May 7, with only a small number in attendance. The discussions were both interesting and instructive to those present. The election of officers for the ensuing year, resulted as follows: President, S. A. Shook, Springville; Vice-President, C. J. Haight, Rush; Secretary and Treasurer, H. M. Seeley, Harford. The totals of the reports of those present, are as follows: Honey crop, 1890, 6,400 pounds. Number of colonies, Fall of 1890, 659; Spring of 1891, 546. All reported their bees as in fair condition. H. M. SEELEY, *Sec.*

Harford, Pa.

◆

Bee-Keeping in Washington.

Our bees have done nothing to speak of this season, on account of the superabundance of rain, although they work when there is a chance for them. I am transferring all my bees to the Langstroth style of frames, from the box-hives, and they are doing nicely, so far. J. B. RAMAGE.

Blaine, Wash., May 7, 1891.

◆

Old Shiny Bees.

Can you tell me what is the matter with my bees? I bought 5 colonies this Spring, and they all act the same. They seem to be carrying out black, shiny bees. I thought at first they were robbers, but they are still carrying them out, and I think it must be a disease of some kind. WM. CRAIG.

Luce, Mich.

[They are old bees. See answer to J. T. Wilson, elsewhere.—ED.]

◆

Unfavorable Weather for Bees.

I took my bees out of the cellar on April 11, and since then they have had only four or five days on which they could work, the remainder of the time we have had very high winds, day and night. From the 2nd to the 5th inst., there were hard frosts at night, and cold days. From the 7th to the 9th was warm, but yesterday and to-day it is cold again, with the wind from the north. I have taken the BEE JOURNAL for only one year, but I have learned a great deal from it, and shall continue to subscribe for it as long as I keep bees. D. WEISSENBERG.

Stephensville, Wis., May 11, 1891.

Wavelets of News.

Ants in the Apiary.

If they are large ones, get a cent's worth of tartar emetic, and mix about a quarter of it in a little honey (about an ounce or two), and place in their haunts. After they have eaten it, you will see no more of them for about three or four months, when they will begin to come back. A second dose has cleared our house for three years.

It will not work on the small ants, for they will not eat it; and if the coal tar will clean out the small kinds, then with both you can be "ant clear" in the hives and the house. This recipe came from the *Housekeeper*, Minneapolis, Minn. Do not let the bees eat it, for it may lay them up till the harvest is over. —*Gleanings*.

Bees in Asia Minor.

Bee-keeping is carried on in quite a novel fashion by the Yourouks, a wandering people inhabiting the mountainous districts of Cilicia, in Asia Minor. The bee-hives are long trunks of trees hollowed out, with the ends stopped with cakes of earth, and are kept in a corner of the tent. The bees are carried on the backs of camels with their owners wherever they go, and the honey resembles cakes of soap, for it is boiled, wax and all, before it is used for food.—*Exchange*.

Cuban Honey Production.

As we go on from one year to another in any business, we arrive at conclusions as to whether the enterprise is paying or not, and the probable outlook for success in the future.

I started with this business here when it was indeed an experiment—when the movable-frame was a wonder in the eyes of the Cubans; when all you could get for a gallon of honey was 35 cents; but now it brings 50 cents net (for we get pay for all the packages); and if the duty is ever removed, so that when you get short we can send you a little to help you out, why, then we shall get more.

So, after the experience of the years I have been here, I cannot but feel the greatest confidence in the future of Cuba's honey crop. It will go on and ultimately reach that grand climax that is enjoyed by him, or that country that stands upon the top round of the ladder. The business is passing into the hands of the actual producers—men of more or less experience in honey producing, and as such is always a step in the right direction, and it cannot but result in a permanent good to the business and all concerned.—A. W. Osburn, in *Gleanings*.

Distance that Bees Go for Nectar.

Some writers maintain that bees will go from three to four miles in search of nectar, and store a large quantity of surplus. I have found hundreds of colonies in the woods, and but very few of them were lined the distance of a mile. At this distance the line would lead through open fields and brush lots. During the past two seasons my apiary has consisted of 19 colonies of Italians. When at work in the fields, traveling the highway, picking wild berries on the mountain where golden-rod, aster, pinks, old field balsam, etc., grew in profusion, I kept strict watch, and not an Italian bee was seen at the distance of 1¼ miles from the apiary. One mile seemed to be about the limit of their search, and but very few were observed at this distance.—*Farm and Home*.

Sweet Clover for Pasturage.

M. Bignens, in the *Revue Internationale*, reports a profitable crop of melilot, getting a good yield of honey during its bloom, while surrounding bee-keepers, a mile or two distant, got little or nothing. It was sown with barley, and sheep and cattle ate the straw greedily. M. Bertrand, the editor, says that his pony ate a mixture of oats and melilot, and the pony much perferred it, thus "perfumed," to the clear oats.—Dr. C. C. Miller, in *Gleanings*.

Spring Work in the Apiary.

My family and myself have had an extended visit from *La Grippe*, which retarded all work in the apiary this Spring. I removed part of the Hill's devices; bees dislike empty space, and as long as they are on cluster under them, and as soon as honey is to be had, build comb under them. It is better to remove them, and have bees cluster upon the brood.

Bees have been holding high carnival for a week, for the maples have been trimmed in fringes, and their delicate trimmings yielded largely of both honey and pollen, and now they are putting forth their best efforts to insure a crop of peaches upon the two dozen trees located in different parts of the apiary. Cherry bloom is very abundant, and crab-apples are opening.

I am sorry to record the absence of white clover. I have diligently searched. I have failed to discover a single plant. It is our main reliance for white honey in this section. Its failure to appear may be accounted for by the protracted drouths which have prevailed for several seasons. The warm, showery, weather which has prevailed during this month was very favorable for vegetation, and now young clover of two leaves may be found. But it will be too late to yield honey this season. It will be a grand bonanza this season for an apiarist to be located near to a field of alsike clover (*Trifolium hybrida*), in the absence of white clover. I am not aware of any fields of this clover being within flight of my bees. Sweet clover, melilot, is yearly on the increase in this locality, and is now of very rank growth for this time of the year, and will bloom from the middle of June until October.—MRS. L. HARRISON, in the *Prairie Farmer*.

◆

Combs Built on the Limb of a Tree.

Did you ever know or hear of a swarm of bees building their combs in the open air, in the limbs of a tree, in this country? I believe they do in tropical countries. In going through my pear orchard in November, after the leaves had fallen, I saw what I took to be a hornet's nest; but on examination I found it was a large bunch of comb, built by a swarm of bees. I got a ladder and took it down. It is quite a curiosity.—W. W., in the *Ploughman*.

◆

Chilled-Brood and Foul-Brood.

One of the results of non-protection in the Spring is chilled and dead brood, liable to end in foul-brood. So says Allen Pringle, and so say a great many other writers on bees. Now, is it a fact, that foul-brood can be started in that way? I, for one, do not believe it. I have been a bee-keeper all my life, and am now 67. I always winter my bees out-doors, and have never seen a case of foul-brood yet. I am quite sure that I have had hundreds of cases of chilled and dead brood, in all of these years.

Sometimes a colony gets brood well started in the Spring, and then deserts the hive, or "swarms out," leaving their brood to chill and die, and then the first warm day that comes, the other bees in the yard go in and clean out the honey, and suck those chilled and dead larvæ as dry as chips.

Another colony dies early in Spring from starvation, leaving brood to chill and die. The other bees overhaul the combs in search of plunder, and no foul-brood results.

Now, there is a long list of cases in all those years of bee-keeping and out-door wintering where there has been chilled brood, but never a case of foul-brood has there been, How is it that I have escaped? Can any one prove that foul-brood ever originated in such way? I doubt it.—E. FRANCE, in *Gleanings*.

◆

Spreading the Brood-Nest.

I think it bad practice to force the bees in the forepart of the season to enlarge their brood-nest by spreading the frames of brood, and inserting an unoccupied one in the center. It will, as a rule, do more harm than good. Strengthening weak colonies by combs of brood taken from strong colonies is a good plan, but requires a good understanding and judgment not to work damage. It should not be done until Spring is well advanced, and with us, not before the middle of May. The brood taken must be about all sealed, and some of it ripe enough to hatch. If the colony to be strengthened is very weak, cage the queen for two or three days, and shake in a good lot of young bees from other colonies. If the bees are taken from different colonies, they will unite all the better. The old bees thrown in with the young ones, will, of course, go back to their hives, but if plenty are shaken in, enough will stay to make, with the additional brood put in, a good colony, with little trouble.—JULIUS HOFFMAN, in the *Farm and Home*.

◆

Why Bees Cluster on Leaving Hives.

As I state in my Bee-Keepers' Guide, I think the bees cluster to give the queen a rest after trying her wings, which are unwonted to labor. I supposed it settled, that bees look out a home before the swarm issues. They certainly do sometimes; and if so, I guess always.—PROF. A. J. COOK, in *Gleanings*.

◆

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ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

☞ Subscribers who do not receive their papers promptly, should notify us at once.

☞ Send us *one new* subscription, with $1.00, and we will present you with a nice Pocket Dictionary.

☞ The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to pay for another year.

☞ Systematic work in the Apiary will pay. Use the Apiary Register. It costs:

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 25
" 200 colonies (420 pages)	1 50

☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

If you have a desire to know how to have Queens fertilized in upper stories, while the old Queen is still laying below—how you may *safely introduce* any Queen, at any time of the year when bees can fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact, everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and is as interesting as a story. Price, $1.00. For sale at this office.

◆

The "Farm Poultry" is a 20-page monthly, published in Boston, at 50 cents per year. It is issued with a colored cover and is finely illustrated throughout.

We have arranged to club the AMERICAN BEE JOURNAL with the *Farm-Poultry* at $1.35 per year for the two. Or with the ILLUSTRATED HOME JOURNAL at $1.75.

◆

The Convention Hand-Book is very convenient at Bee-Conventions. It contains a simple Manual of Parliamentary Law and Rules of Order for Local Bee-Conventions; Constitution and By-Laws for a Local Society; Programme for a Convention, with Subjects for Discussion. In addition to this, there are about 50 blank pages, to make notes upon, or to write out questions, as they may come to mind. They are nicely bound in cloth, and are of the right size for the pocket. We will present a copy for one new subscription to the BEE JOURNAL (with $1.00 to pay for the same), or 2 subscribers to the HOME JOURNAL may be sent instead of one for the BEE JOURNAL.

◆

When talking about Bees to your friend or neighbor, you will oblige us by commending the BEE JOURNAL to him, and taking his subscription to send with your renewal. For this work we will present you with a copy of the Convention Hand-Book, by mail, postpaid. It sells at 50 cents.

◆

Calvert's No. 1 Phenol, mentioned in Cheshire's Pamphlet on pages 16 and 17, as a cure for foul-brood, can be procured at this office at 25 cents per ounce, by express.

BE UP AND DOING.

"Tell me not in mournful numbers"
Advertising doesn't pay,
For the man's non compos mentis
Who would such absurd things say

"Life is real! Life is earnest!"
And the man who hopes to rise
To eminence in any calling
Must expect to advertise.

"In the world's broad field of battle,
In the conflict of real life,"
Advertising is the magnet
Of achievements in the strife.

Lives of rich men all remind us,
"We can make our own sublime,"
And by liberal advertising
To the brightest summit climb.

"Let us, then, be up and doing,"
In this journal "ads" insert;
"Still achieving, still pursuing,"
Business then will be alert.

◆

☞ In the *Phrenological Journal* and Science of Health for May there are several notable titles that must commend themselves to readers, whether regular or occasional, especially the piquant remarks in "The Voice," "Laughter," and "The Hair," and the odd "Reverie on Feet," with its striking sketches of attitude. The other parts of the number are filled with seasonable items, not one of which has dry flavor. Fowler & Wells Co., 775 Broadway, New York, publishers.

◆

☞ I am well pleased with the Sewing Machine you sent me; any person wanting a good Sewing Machine—one that is equal to the high-priced machines which are sold by agents—can do no better than to send for your $15.00 Machine. They will be agreeably surprised when they see it. Mine is really better than I expected.

W. J. PATTERSON.
Sullivan, Ills., Dec. 5, 1890.

◆

☞ The Union or Family Scale has been received, and I am much pleased with it.

W. H. KIMBALL.
Davenport, Iowa.

CLUBBING LIST.

We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

	Price of both.	*Club.*
The American Bee Journal	$1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Guide	1 50	1 40
Bee-Keepers' Review	2 00	1 75
The Apiculturist	1 75	1 65
Canadian Bee Journal	1 75	1 65
American Bee-Keeper	1 50	1 40
The 7 above-named papers	6 00	5 00
and Langstroth Revised (Dadant)	3 00	2 75
Cook's Manual (1887 edition)	2 25	2 00
Quinby's New Bee-Keeping	2 50	2 25
Doolittle on Queen-Rearing	2 00	1 75
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 60	1 50
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	2 20
Western World Guide	1 50	1 30
Heddon's book, "Success,"	1 50	1 40
A Year Among the Bees	1 50	1 35
Convention Hand-Book	1 50	1 30
Weekly Inter-Ocean	2 00	1 75
Toronto Globe (weekly)	2 00	1 70
History of National Society	1 50	1 25
American Poultry Journal	2 25	1 50
The Lever (Temperance)	2 00	1 75
Orange Judd Farmer	2 00	1 75
Farm, Field and Stockman	2 00	1 75
Prairie Farmer	2 00	1 75
Illustrated Home Journal	1 50	1 35
American Garden	2 50	2 00
Rural New Yorker	2 50	2 00
Nebraska Bee-Keeper	1 50	1 35

Do not send to us for sample copies of any other papers. Send for such to the publishers of the papers you want.

◆

Convention Notices.

☞ The Rock River Bee-Keepers' Association will meet at Sterling, Ills., on Thursday, Aug. 6, 1891.
J. M. BURTCH, Sec., Morrison, Ills.

☞ The ninth annual meeting of the Susquehanna County, Bee-Keepers' Association will be held on Thursday, Sept. 3, at South Montrose, Pa.
H. M. SEELEY, Sec., Harford, Pa.

☞ The Spring Meeting of the Cortland Union Bee-Keepers' Association will be held at the residence of President J. H. Kennedy, 126 Groton Ave., Cortland, N. Y., on Tuesday, May 26, 1891. A special invitation is extended to the ladies. All interested are invited. J. H. KENNEDY, Pres.
M. H. FAIRBANKS, Sec., Homer, N. Y.

☞ The Des Moines County (Iowa) Bee-Keepers' Association will meet at the Court House, in Burlington, Iowa, on Tuesday, June 2, 1891, at 10 a.m. It is intended to organize a Southeastern Iowa Association. All interested in bees and honey are cordially invited to attend.
JOHN NAU, Sec., Middletown, Iowa.
GEO. BISCHOFF, Pres., Burlington, Iowa.

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THOMAS G. NEWMAN,
EDITOR.

Vol. XXVII. May 28, 1891. No. 22.

Editorial Buzzings.

Ask the wild bees hovering over
Yon wind-drifted bank of clover,
Why they loiter so.

Some refer to this as a "backward Spring." But we must not *look forward* for any Spring belonging to this year.

We Had a pleasant call from Dr. C. C. Miller last Friday. He has recovered from his severe attack of *La Grippe*, and is now "himself again."

Honey from fruit blossoms has been plentiful this season, and the bees have fared well on it for stores and brood.

Rain, in generous quantities, has refreshed vegetation all over the Northern States. It has been worth millions of dollars to the tillers of the soil. In many places it was getting very dry, and the rain was sadly needed.

Prof. Cook will go to Washington about Aug. 15, and will "leave no stone unturned" to accomplish the reversal of the ruling concerning the necessary proofs of pedigree, etc., in order to admit imported queens free for breeding purposes, and thus at the same time permit them to be sent from Europe to America by mail, for making them subject to duty on arrival is the only reason for them not being mailable. Prof. Cook adds: "I believe that I can secure a ruling that will make it all right. If we cannot secure that, then we will have the law modified by the next Congress."

Frosts have been doing much damage in some of the Northern States. A letter from Kalamazoo, Mich., on May 18, thus records the present condition of crops in that vicinity:

> Frost last night and the night before, in the fruit district, did more damage than the one two weeks ago. Ice formed half an inch thick. Strawberries are badly hurt; raspberries not so much; cherries nearly destroyed; peaches not much injured; grapes on low ground pretty badly bitten, on the hills not so badly. All crops are suffering from the prolonged cold weather and drouth.

The Honey Crop of California, in 1890, was good—not equal to 1884, but much better than for several years past. Messrs. Schacht, Lemcke & Steiner, of San Francisco, estimate the crop at 4½ millions of pounds of extracted, and half a million pounds in the comb—making 5 millions in all. The quality was very choice, and nearly all of it has been sold, leaving the markets almost bare. Much of it has been sent to Europe. The average price of comb-honey has been 12 to 13 cents; for extracted-honey 5½ to 6 cents. The one-pound sections have nearly driven the two-pound California frames out of the market. The latter were the popular size only a few years ago.

The honey crop for the present year is very satisfactory so far as reported.

Another Triumph for the Union has just been achieved in California. In Tulare county, Mr. F. M. Hart and others kept some bees. A grape-raiser circulated a petition to the Board of Supervisors, to have the bees removed, because they were charged with ruining the grape crop—that damage was done by rain, however. Mr. Hart wrote the facts to the Manager of the Union, who, last February, instructed him how to proceed, and sent copies of the Arkansas Supreme Court Decision, to be placed in the hands of the Board, and head off the petitioners. The result may be seen by the following from the proceedings of the Board of Supervisors, as published in the Visalia *Delta* of last week:

THE BEE-MEN WIN.—At the last session of the Board a delegation of Lucerne county people appeared before the Supervisors for the purpose of having an ordinance passed, making bee-keeping a nuisance. A delegation of bee-men were also present, for the purpose of remonstrating against any such action. The matter was laid over until the May session of the Board. On Saturday the matter was taken up for consideration. District Attorney Power filed the following written opinion regarding the matter:

In reply to your question, "Can the Board of Supervisors prohibit by ordinance the keeping of bee-farms?" I would say that bees are property, and that being such you cannot destroy the right of the owner therein. If these farms are so kept that they are an interference with the enjoyment of the lives or property of others, they are nuisances under Sec. 3479, Civil Code, under which the injured parties may cause them to be abated. One cannot conduct a lawful business in such a manner as to interfere with another's rights (Tuebner vs. Cal. St. R. R. Co., 66 Cal., 171); and the question of the existence of the nuisance is one of fact (1 Cal., 386; 1 Cal., 467; 3 Cal., 238; 29 Cal., 156; 30 Cal., 379; 45 Cal., 55).

Any attempt of the Board to prohibit these farms on the ground that they are a menace to fruit farms would be a usurpation, by it, of the functions of courts and juries, a denial to the citizen of his property-rights, and practically a confiscation of his property without due process of law. You may impose a license on bee-farmers for the purpose of regulation and revenue (Co. Gov. act., Sec. 25, subd. 27).

MAURICE E. POWER, District Attorney.

After the reading of the above opinion, it was ordered that the petition declaring bee-keeping a nuisance be denied, on the ground that the Board has no jurisdiction in such matters. This ends the matter for the time being, however unsatisfactory it may be to the fruit men of Lucerne valley.

Mr. Hart wrote as follows on May 16, 1891:

MR. NEWMAN:—Since you instructed me how to proceed, I have felt quite easy about the fruit-growers' petition, but most of the bee-men have been in hot water all the time. Quite a number of them have sold out at a great loss, while others have moved from 50 to 80 miles to the mountains on the west of the valley. A few remained with me to "weather the storm." There were about 135 signatures to the petition, but we have won a substantial *victory!*

F. M. HART.

Traver, Tulare Co., Calif.

The Union is to be congratulated upon another victory without cost, except its moral backing and some correspondence and energetic work. While Mr. Hart's action was directed by the Union, he remained in perfect quietude, and his rights have been sustained. His neighbors became frightened at the "cry of the wolf," fled to the mountains, and sacrificed their property. How much cheaper and more comfortable it would have been to have held a membership ticket in the Union, and had its backing, moral support, and defense!

* * *

A Nice sample of six-banded Italian bees are received from the Rev. W. P. Faylor. They are bright yellow, and some of them show a little spot of dark on the back, giving them a beautiful appearance.

* * *

Extra Thin Foundation is received from W. H. Norton, of Skowhegan, Maine, which is very transparent, and shows beautiful workmanship. It takes 34 sheets, 4x16½ inches, to make a pound, being about 15½ square feet to the pound. This is, we believe, thinner than any manufactured, so far, with the natural base for cells. In fact, it looks much like the Van Deusen flat-bottomed foundation, justly admired for its thinness and beauty.

Aaron Coppin is made to say, on page 456, that the State Fair premium on bees was given to him, and not to Mr. Trego. The writing was so poor that the letter had to be copied and reconstructed before it could be given to the printer. It was, of course, fully intended to convey the exact idea of the writer, but it seems that such was not done. He desired to say that though the premium was awarded to Mr. Trego, in justice it belonged to him, had the award been made on the merits of the case. This straightens out an apparent contradiction, and should have been made public long ago, but on account of our enforced absence from the office by sickness, it was overlooked until now.

◆

Spraying of Trees before fruit bloom is exciting considerable discussion now among horticulturists. Some one has sent us the following item, published by the Lyons (N. Y.) *Republican* on May 5, 1891:

> Several farmers report that the insect which has destroyed so many millions of dollars' worth of apples during the past few years, is to be found in the very center of the now hard and tightly-closed bud. No remedy has as yet been suggested, except spraying *as soon as the bud opens.*

We sent the item to Prof. Cook, and asked him to make a reply to it for the American Bee Journal. His answer is as follows:

> As I have repeatedly stated, fruit trees should never be sprayed while in bloom. For the codling moth they should never be sprayed until the blossoms fall, as to do so earlier makes it less effective, and, in case of heavy rains, it may be entirely valueless. It should ever be borne in mind that the codling moth does not lay its eggs until after blossoming occurs. These eggs do not hatch until some days later; hence, the unwisdom of spraying for this insect before the blossoms fall, even from late blooming varieties like the northern spy, is most apparent.
>
> There is, however, some bud moths, the caterpillars of which eat into the buds, and so pass beyond any danger from the arsenites, if not applied very early. The linden span worm, of late very destructive in Michigan, and some other larvæ, have just this habit. Besides, there are the canker worms, that attack the foliage before the buds have fairly opened, and would do quite serious damage if we waited until the regular time for spraying codling moth.
>
> In case any locality is so unfortunate as to be the victim of any of these early despoilers, then the fruit grower should spray as soon as the buds begin to swell, and again after all blossoms have fallen, **but never when the trees are in bloom.**
>
> This season we are getting much honey from fruit bloom, and the bees are doing equally good service for the fruit. A. J. Cook.

◆

Bare-Headed Brood.—A correspondent asks the following question:

> What is the cause of the bees not capping some of the cells of brood, before the brood is full grown, and building some cells one-eighth of an inch longer than the others? I have thought that it was the beginning of foul-brood, and do not know how to treat it.
>
> St. Paul, Minn. J. A. Holmberg.

Bees sometimes leave small patches of brood without sealing. Some think that it is on account of the presence of worms, while others think that the worms have nothing to do with it. It is what is often called "bare-headed" brood. In any case no harm will come of it, and it has nothing whatever to do with foul-brood.

◆

That Picture on page 665 of our last issue made hundreds laugh, no doubt. Well, it is sometimes good to laugh, and that is the only redeeming feature about it. The only way to make anything out of it, is for the reader to "stand on his head," for the engraving appears wrong side up. The way it occurred was this: In the hurry of making up the editorial pages (always the last work done on the forms) the printer inverted it, and the editor did not see anything more of the page until it was printed, when it was too late to correct it. We reproduce it and the article this week, to show how it should have appeared.

Wavelets of News.

Something for Nothing.

The very words are suggestive of dishonesty, for something is the result of somebody's labor, and he who gets it without giving its equivalent in labor or value is beating somebody out of the just fruits of his labor. The really honest man settles the merits of a proposed business transaction by two questions: Am I getting real value? Am I giving real value?

Something for nothing is the meanest and most contemptible form of dishonesty that ever poisoned the moral nature of man. It gets property on the same terms that the thief gets it, but without the courage that the thief possesses in exposing himself to the penalty.—*Western Plowman.*

Chilled Brood, Not Foul-Brood.

Chilled brood never made foul-brood. Does any one really believe it ever did? Do they not rather hold this view: The spores of foul-brood are so plentiful that they are floating around everywhere, and a lot of chilled brood is just the right soil for them to take root in; just as white clover seems to come up of itself.—Dr. C. C. Miller, in *Gleanings*.

Feeding Bees in Spring.

You will be surprised to see what a lot of honey is used up by the bees in rearing brood.

More bees are probably starved in Spring than in Winter. It does seem too bad to get them through the Winter all right, start a big brood, and then have the whole business die for want of victuals.

You can look at the tops of the frames without any lifting out, and if you see any sealed honey, they are in no immediate danger. They seem to have more heart when they see a full cupboard, and go at brood-rearing with a will.

This time of year you need not be so particular as to the kind of feed. Any honey not fit to put on the table, white sugar, brown sugar—so long as they can fly every day they can safely take almost anything, even if soured. Be careful not to start robbing when you feed them.

It is a big thing to get all your colonies strong in time for the beginning of the main honey-flow. Everything depends on this. A big lot of bees a month before that time, means only a lot of bees on expense. A very weak colony that just gets built up by the time the harvest is over is no good.

But few people need have any anxiety about having their colonies strong too early. Better board them a little while before the time for work than not to have workers enough when the time does come.—*Exchange.*

Mammoth Clover for Bees.

In 1889 I had a large field of mammoth clover within a few feet of the hives. The first growth did not attract the bees, as they were busy with the white clover, for all will remember how abundant the white clover was that year. But later, when the second growth blossomed, the bees flocked to it in great numbers. Of course, that was an exceptional Fall for clover, but I think the bees gathered about as much honey from the mammoth clover as they did from the white during the Summer. Our bees, which are Italians, had, I noticed, gathered considerable honey from the ordinary red variety, but they prefer the mammoth. I think the mammoth clover deserves to be sown more extensively than it is, for it not only affords abundant pasturage, but the stalks form a matted covering upon the ground, which is very beneficial.—J. L., of Greene Co., O., in the *National Stockman.*

Prevention of Robbing.

Except during a honey-flow bees from other hives will pounce upon any honey left exposed. If one bee, that may be hovering about searching for such a chance, discovers it and secures a load, he quickly returns with a score of companions, and they in turn, if successful, will each bring as many more, and a large quantity of honey will be carried away in a short time, as well as a great uproar caused, during which there is danger that every person or animal, anywhere near, will be severely stung. So look out and give no robber a chance. —*Exchange.*

What Does Cooking the food accomplish? is asked by a correspondent. Cooking the food accomplishes rapid disintegration of the particles subjected to that process—doing the work in advance of the stomach.

Queries and Replies.

Drone-Laying Queen.

QUERY 768.—A queen introduced last August has proved to be a drone-layer. She has been laying some time, and the drones began to hatch on Feb. 23 or 24, and the hive is well filled with brood. 1. What is the best plan for me to pursue to supersede this drone-layer with another queen, and save my colony? 2. Can I rear, and have fertilized by these drones, a queen in this colony in time to save it? 3. Would it not be more profitable to destroy the bees and save the frames of honey for a swarm? 4. This queen I purchased of a queen-breeder. After she has proven worthless, would it not be right for him to return the money, upon notice of the fact?—Ohio.

3. Yes. 4. Yes; if it can be shown that the queen did not lose her fertility in transit, or if the queen-breeder guaranteed safe arrival.—JAMES HEDDON.

1. Better unite the bees with one of your weaker colonies. 4. Unless there is something unusual about the case, I think he will replace her.—C. C. MILLER.

1. I doubt if it can be done. Bees hatched in August would be dying too rapidly of old age. 2. I think not. 3. That is my opinion. 4. Yes.—EUGENE SECOR.

1. I would destroy the bees and save the combs. 2. It is extremely doubtful. 3. Yes; in my opinion. 4. Yes; or give you another queen.—J. M. HAMBAUGH.

1. Remove her, and introduce a fertile queen. 2. Do not try it; it is doubtful in both cases. 3. I think it would, unless there is a large number of workers. 4. Yes; most assuredly.—J. E. POND.

1. Not worth saving. 2. No. 3. Yes. 4. Are you sure that the drone-layer is the identical one purchased? She might have laid a few eggs, and then been destroyed, and the bees reared one which failed to be fertilized.—MRS. L. HARRISON.

2. Kill the queen and insert one frame of worker brood, with young larvæ and eggs, from your best colony. 2. Yes. 3. It depends on how many bees there are left. 4. Yes; provided it is evident that she is the queen he sent you. It very often happens that a queen is superseded when introduced, by an old discarded queen being in existence in the colony at the time of introduction.—DADANT & SON.

1. I should unite this colony with a weak one. 2. I think so; but a queen reared so early, when bees are few, I should not value very highly. 3. No; unite and save the bees. 4. I think he should send you another queen without extra charge.—A. J. COOK.

1. Take out the drone brood and put in a frame of worker brood, with queen, if you have an extra one; or put the bees in with some weak colony, and destroy the drone brood. 4. I think not, as there are so many things to produce a drone-layer after leaving his hands.—H. D. CUTTING.

1. Remove the queen and give the colony a frame or two of brood, some of it ready to hatch. 2. Yes, by giving brood as above. 3. No. 4. Yes; if there is no room to think that the queen you purchased was lost, and that the present one was reared by the bees afterward.—M. MAHIN.

1. Supersede the queen as soon as a fertile queen can be secured. 2. A queen reared from such a one, fertilized by her own drones, would probably be entirely worthless. 3. No; I would let them live and see what can be done with them. 4. I think the breeder will send a new queen when the facts are explained to him.—C. H. DIBBERN.

1. Introduce a good queen. 2. I think not. It has not been proved that such drones are virile. 3. Better to unite with another colony. 4. If a queen-breeder sends out a good queen, and for some cause unknown she proves worthless, it would seem that the purchaser would lose. However, I should be willing to stand the loss in such a case.—G. L. TINKER.

1. I have saved several colonies that proved to have drone-laying queens by giving them brood from strong colonies, at the same time removing the unfertilized queen, leaving the bees to rear a successor. But this was done in the latter part of March, so as to have the young queen ready for the first drones. 2. In all my experiments, I have failed to get a queen mated by drones that were the progeny of an unfertilized queen. I have tried such drones often and carefully, and I believe they are sterile, and no good. 3. I think you had

better give up the old, worn-out bees, and utilize the hive and combs for an early swarm. 4. I should return the money if I had chanced to send out such a queen.—G. W. DEMAREE.

1. Remove the drone-layer, and introduce another queen, which is very easily done at this time of the year, in such a case. 2. As they have probably been reared in worker-cells, I would not trust the drones. If strong, by giving the colony some brood now and then, and destroying the queen-cells, until about time for drones to fly, you could. 3. That would depend on the circumstances of the case. 4. Yes; or a queen.—R. L. TAYLOR.

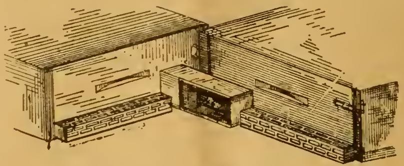
1. Pinch the drone-layer's head and give the colony another queen. Add a frame or two of emerging brood from some strong colony, to assist in building up. 2. If the drones are hatched in worker-cells, they would be physically defective, but if in drone-cells, they would be capable of fertilizing your queens. 3. No. 4. He should replace the queen, provided you informed him that she was a drone-layer as soon as you discovered the fact.—J. P. H. BROWN.

1. Kill the queen and give a frame (from another colony) of hatching brood, and one of eggs and small larvæ, to keep the colony in heart till they can rear a queen. 2. Yes; as I have given above. 3. No; I think not; only as brood is given. 4. Well, that depends. If a "dollar queen," according to the "father" of this idea, all you were guaranteed was that a laying queen was to be sent you, so you have no right to ask a return of your money. If a tested queen (unless you can prove that a poor queen was purposely sent you), she was doubtless injured in transit, and if so, was the breeder to blame? If not, why should he refund the money? Again, the queen may have been injured after reaching you by the bees or yourself, and afterward "proven worthless." If the queen was a warranted queen, or in any case, it seems to me the proper thing to do would be to kindly state the case to the breeder, and ask if he would not replace her. If he is a gentleman, he will do so—unless the queen was a "dollar queen."—G. M. DOOLITTLE.

The colony is not worth fussing with. Destroy the bees and queen; and save the combs and honey. If the queen was guaranteed, of course the breeder will replace her.—THE EDITOR.

Hiver and Drone-Trap.—Mr. N. C. Petrie, of Cherry Valley, O., has obtained a patent on a new hiver and drone-trap, one of which is sent to our Museum. Mr. Petrie says:

Its special object is to direct a swarm of bees into an empty hive. The attachment is hung on the hives by hooks secured to the upper side of the device. It is an elongated L-shaped box, with openings in the end, and deflecting cages or guide ways laid from the openings. These guide ways are made of zinc, perforated, the perforations being of a size to permit the workers to pass readily therethrough, but pervents the escape of the queen and drones. The guide ways are entirely open on the sides adjacent to the hives, so that the bees may freely enter, and by them be directed into the attachment. They may be also open at the bottom to affect an economy of material, the ledge of the hives preventing the bees from passing. The front and left sides are covered by wire screening, so that the movements of the bees may be observed.



PETRIE HIVER AND DRONE-TRAP.

The main idea of our swarmer is to allow enough workers to accompany the queen to induce her to remain in the new hive, and we think that our swinging partition will allow three times as many bees to accompany the queen as can go with her by using the cone.

The swinging partition is hung from the top of the box, and is met about two-thirds of the way by an elevated platform or step, which reaches to within ⅛ of an inch of the bottom of the partition or gate, leaving room for a worker to get under, but forcing the queen or drone to swing it inwardly. It is prevented from swinging outward by a staple in the top of the box inside.

◆

Prof. Totten, of Yale University, predicts that the millennium will come early in 1899. His startling contributions to *Frank Leslie's Illustrated Newspaper* on this subject are attracting world-wide attention.

Topics of Interest.

Qualities of the Punic, or African, Bee.

"A HALLAMSHIRE BEE-KEEPER."

So much has been said *pro* and *con* about the "Coming bee," to be called *Apis Americano*, the qualities it is to possess, etc., that many will be surprised to learn that a bee has been found, that excels anything ever predicted in the coming American wonder.

The name of this bee is the Punic bee —*Apis Niger*. It is ebony black in color, and is a smaller bee than our native blacks, or the Italians; there are no bands or marks of any kind on it; young bees are the color of green ebony, shading off to true raw ebony when beginning to field, and finishing off to polished black ebony when old, and all hairs are worn off them. Their qualities are:

1. They are the tamest bees so far known, the only time when it is possible to get them to sting, being when they have the swarming fever.
2. In crossing with other races, this docile quality is very marked, not even Cyprian blood being able to make them bad tempered.
3. They are the hardiest bees known, being able to fly from and return to their hives with safety with snow on the ground, and mercury 30° above zero.
4. They do not fly into the snow like other bees.
5. They begin work at the "peep of day," and before the sun rises they are working in full force, and have the ground picked over before other kinds are on the move. Probably this is the chief reason why they get more honey than any others.
6. If the day is rather dull, or cool, they will be working in full force, though no other kind of bees will be flying.
7. The queens are very prolific.
8. In a fair season the smallest nucleus will build up, without feeding, into a grand colony for Winter. So much is this "building up" quality present in them, that a good, strong colony can be divided into 20 at the end of May, and each will build up in a good season, without feeding, into a 10-frame colony well stored for Winter, and yield one or two 20-pound supers of honey from the heather.
9. They beat every other kind of bees in their working energies.
10. They live longer than any others.
11. They fill and seal sections fuller, and cap them whiter than any other race.
12. For extracted-honey, they have no equal.
13. They can eat the hardest and dryest sugar; in fact, they will carry away the hardest and dryest sugar loaf (when no honey is to be had) put under a shed and kept as dry as possible; thus reducing the trouble of Summer, Spring or Winter feeding to a lower point than has ever been considered possible.
14. Although they search out sweets and carry them off anywhere, they are *not inclined to rob other hives*—honesty, being with them, a ruling guide or principle.
15. They swarm earlier than any others.
16. They fill cracks or chinks with an enormous quantity of propolis, and if natural supplies fail, nothing "sticky" comes amiss, *e. g.*, bird-lime, coal tar, etc. Some may deny that this a desirable quality, but with it they keep their combs clean, and thus make *anything* do for hives—even baskets.
17. They cluster well on their combs, spread evenly over them, and shake off readily.
18. They build little drone-comb, but plenty of worker, as white as snow.

To sum up, they are docile bees, hard-working, prolific, non-robbing; easy to handle, and best for nice, white, well-filled sections.

They have very many more good points that are more in fávor of the queen-breeder, horticulturists, etc., than the honey producers; these being the parties to appreciate the bee that does not sting, and will build up from 1 to 20, and possibly yield 1,000 pounds of surplus honey.

They also have the following characteristics: If a pure-blooded-queen mates with a drone of any other race, her bees are a *blend* of the two races, and though better than the race mated to, are not so good as pure. This seems an invariable rule, as in no instance have I had them as good as the pure race—crossing every other race, in my experience, results in a better bee, taken all around.

If a pure Punic drone mates with a queen of any other race, the resulting bees almost equal pure Punics for honey gathering, and in other respects the cross is very marked—Carniolans, for instance, using propolis as much as pure Punics.

So that, taking them all around, I fail to see how mixing any of the blood of the present races, will be an advantage. The Punics will improve them, but they themselves will not be improved, so that we most go in for pure Punics alone, if it is desired to have the best possible.

I have never seen their equal in building comb, which is nearly always worker, and as white as snow. Their brood is always compact, and sealed in such a manner that I could easily pick out one frame of Punic brood in a thousand.

In "building up," all we have to do is to see that they have plenty of stores; if not, then feed them as rapidly as possible, and let them alone, and they will breed away as if they intended to fill the earth with bees, and work hard, too, in picking up more food. No stimulative, slow feeding; no brood spreading, etc. All that they require is plenty of room, and sure enough they will fill it if left alone, and the season is a favorable one.

Speaking of "feeding," I have not had to feed an established colony yet. Other races may have dry combs, but they will not. The season of 1888 was the worst known here, yet I got 12 pounds of surplus from one colony, and had to feed all other kinds all Summer and for Winter.

I often feed up colonies in the Fall, to work them up into a condition for Winter, and, again, may give them a feed in the Spring.

All around, I have found them a most wonderful bee, and yet for a long time I was prejudiced against them; they were *black* for one thing, and I was *sure* they would never withstand our long Winters, so I was somewhat indifferent whether they lived or not, until their wonderful building-up qualities struck me, and made them more interesting, especially when the Winter proved them the hardiest lot of bees I had.

If I had had less prejudice, I should have gone in for them largely the following year—1887—but instead of doing so, I Cyprianized nearly my whole apiary. I have only one colony of Cyprians now; the reason I have cleared them out being they are no good as honey gatherers.

I have tried Palestines, Syrians, Italians, Cyprians and Carniolans with the result that I find the only bee which excels our native blacks are the Punics. Carniolans are a good race, and stand third on the list.

I am fully convinced that the very best bees will be found in Africa, but whether it will be the Punic, or some other race, near the great central lakes, remains to be seen; anyhow, *here*, we are getting bees from Africa.

It is quite a regular thing for a first swarm to leave 200 queen-cells behind, while 600 is really nothing to be surprised at. If a frame filled with drone-foundation, or a drone-comb, cut down to midrib, is put in a colony about preparing to swarm, every drone-cell almost will be worked out into a queen-cell, that is, vertically, but hexagonal, but when sealed the cappings are just like drone-brood sealed, and every bee-keeper would say it *was* drone-brood.

This is a curious feature which I have never noticed in any other kind of bees. I think it is quite possible to get 2,000 cells sealed to work in this manner, but cannot say, not having tried to get them, as it was impossible to find colonies or nuclei for what I did get. I have not put this down as a good point, as it is more for the queen-breeder than the honey-producer.

Sheffield, England.

Spiral-Spring Queen-Cell Protector.

N. D. WEST.

Friend Newman:—In June, 1889, I sent you a sample of a queen-cell protector and cage that I had invented, but asked you not to publish anything about it, for I wished to thoroughly test them, and did not know whether it was best to get a patent on them or not.

I find they are far superior to any cell-protector I ever saw, and I send you a sample again to-day with a circular explaining its uses. I have applied for a patent on it, and it is about through now.

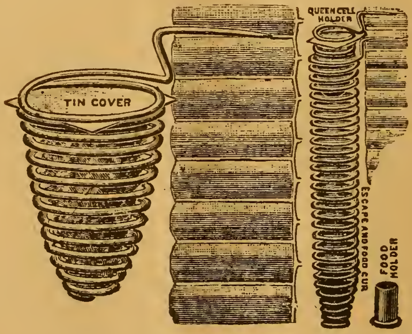


Fig. 1. Fig. 2.

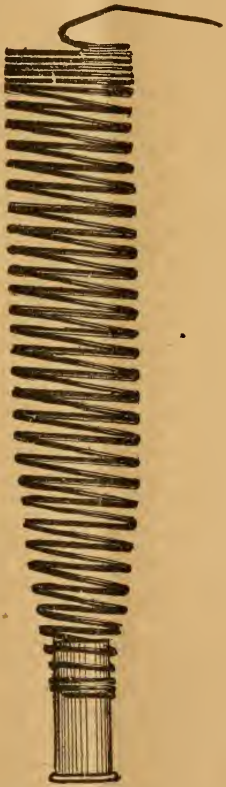
WEST'S SPIRAL-SPRING CELL-PROTECTOR.

I find that the bee-keepers only have to see it to know that it is a good thing;

very convenient to use, cheap and durable, and by the use of both the cell-protectors and cages, we can control swarming about as we please, and re-queen the hive at the same time with the best natural cells, and at the proper season, too, without cost or much trouble.

I wrote the following for *Gleanings*, and now copy it for the AMERICAN BEE JOURNAL, so that its readers may learn of the uses and advantages of my queen-cell protector:

The cell-protector was worth over $100 to me two years ago in swarming time, as I re-queened over 100 colonies with cells from my choicest ones, and at the same time stopped swarming where the cells were introduced. My bees wintered well, and came out strong the following Spring, while others lost very heavily all around here.



COILED WIRE QUEEN-CAGE, WITH A CARTRIDGE SHELL FEEDER.

I dare not say that it is a positive fact that the method I practiced two years ago will always prevent swarming, but it did with me in four different yards, and it was a swarming year, too. The hives that I did not treat that way nearly all gave swarms, and in many of them I killed the queen while the swarm was on the wing, and destroyed the cells in the hive, and gave them a choice queen-cell in the protector, from a hive that had cast a swarm five or six days before. This is easily done while the bees are on the wing.

This way of re-queening an apiary costs nothing, and gives a chance of doing it when swarming-cells are plentiful, and this is the time to do it, because we can get better queens; and by going to a hive that has not swarmed, and especially if for any cause the queen is condemned, kill her and destroy the cells, if any are started, and give them a choice cell in the protector at once.

If you want queens for this purpose, go to a hive that has cast a swarm five or six days previously, cut out carefully all the cells you wish to save; place them in the protectors; lay them in a box of cotton, or have a block with a number of holes to set them in, until you are ready to use them.

Now, when all cells are cut out, just place the cell, as it is already in the protector, on the side of a comb in the same hive. By pushing the spur of the protector (see Fig. 1) into the comb, it will stay there; and the long queen-cage placed below (see Fig. 2) it, with its spur pushed into the comb, will also stay, and there is queen food in the bottom of this cage, so that, when the queen hatches, she will run down into this cage. In this way you have a queen-nursery in any hive, and hatch out as many queens as you wish.

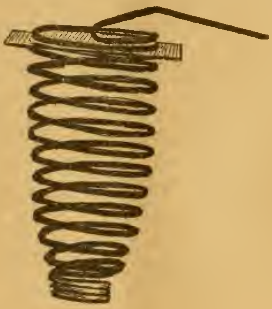
Now, after the cells are hatched you can make as many nuclei as you have queens, by just taking one frame with adhering bees, and place in an empty hive; place another comb by the side of this; give them one of these virgin queens; close the hive, and so on until the cells are closed up, and wait until they lay; then do with them what you please.

HOW TO USE THE CELL-PROTECTOR.

Hold the small end of the protector between the thumb and first and second fingers of the left hand. Hold the queen-cell by the big end in the right hand in the same way. Now you are ready to put the cell in; and as soon as the fingers of the right hand touch the cage, it will shorten up by pushing slightly, so as to fix the point of the cell just through the small end of the protector. Let loose with the right hand, and the coil will spring back and cover the butt end of the cell; slip the tin cover in between the wire coil, just above the butt end of the cell; then you are ready to put the cell in a hive.

Then just spread the combs apart far enough to put your hand in; now push the spur of the protector in the comb where you want it (see Fig. 1). I leave them just below the top-bar. Now place your frames, and it is done. The top of the protector is in plain sight when the hive is open.

Care should be used to handle the cells right side up, without a jar. It is a satisfaction to look in a few days and find the cells all whole, except where the queen has helped herself out. The bees cannot destroy the cell before she hatches, if properly put in; neither will it be destroyed by spreading the frames, if you wish to do so.



COILED WIRE QUEEN-CELL PROTECTOR, WITH TIN SLIDE COVER.

Middleburg, N. Y. N. D. West.

These spiral-spring queen-cell protectors have been in our Museum for two years, and have been admired by all who have seen them. They are excellent for the purposes indicated by Mr. West, in the above article, and will no doubt very soon be considered *indispensable* in every well-regulated apiary. Mr. E. R. Root adds the following endorsement to Mr. West's article in last month's *Gleanings*:

Mr. N. D. West is one of those bee-keepers at whose place I stopped in my bicycling tour. He owns about 400 colonies distributed in three apiaries. Although I made at his place a very brief call of only some fifteen or twenty minutes, I became convinced of the fact, by looking around with his son (the father being absent), that he is one of the bee-keepers who ought to let their light shine a little more. I met him for the first time at the Albany convention, and there he showed me a spiral-spring cell-protector.

Several bee-keepers who have tried them, said that they were a good thing. I have since been informed that Capt. Hetherington considers them so good that he has ordered 500, and that P. H. Elwood also wants a lot of them, and that both say they are ahead of anything else they ever saw for a protector. Mr. W. L. Tennant said he would rather do without comb-foundation than do without these protectors. This estimate is perhaps a little strong.

I am well aware that this looks like free advertising; but when so many good bee-keepers assure me it is a good thing, I am glad to give it this notice, particularly as Mr. West charges a very reasonable price for them. As he pays for advertising space elsewhere, he cannot be accused of taking advantage of this notice free,

We are all aware that the principle of the protectors is old, and that Doolittle has used a *wire-cloth* cone for years, but I believe the idea of using a spiral-spring is new. The point of superiority over wire-cloth cone-protectors is, that the spirals adjust themselves to the size of the cell, causing the tin-slide shown in the engraving to press down on top of the cell, so that the end, or point, of the cell is squeezed against the apex of the cone. With the wire-cloth protectors I have known bees to push the cell up, crawl inside of the cone, and gnaw into the side of the cell; but they could not very well do it with Mr. West's spirals.

The point he makes, that the requeening can be done during swarming time, is a good one, as is also the point that an extra-long cone can be attached to shorter ones, the queen hatched out, and be retained a day or two until a place is found for her. The facility with which these cones can be attached to the combs is another point in their favor.

[The reader's attention is now directed to the advertisement of these useful articles on page 692. We have given the above with the illustrations, in order to make Mr. West's invention as plain as possible to all.—Ed.]

Spring Dwindling; Its Cause and Cure.

EDWIN PIKE.

This is a subject that extends further, and, I might say, deeper than most authors conduct their researches.

It would be impossible to elaborate this subject at this convention, for the reason that our schedule time will not permit. Therefore, we will choose the most important questions pertaining to it.

To begin with: Do not think that I, or any other critic, can go to one of your *dwindling* colonies in April and put them in a healthy and thriving condition in ten minutes, or in a day. I could not attempt it; neither do I believe I could do anything of the kind. But I hope it will be sufficient, and I trust I shall succeed in giving good advice, how to lessen this evil that troubles us all, by putting into practice a few methods that will give us better results, in future years.

A colony of bees in April with a vigorous queen, strong in worker-bees, healthy and thrifty, is essentially a desirable colony, and, without doubt, will give good results the following season. But what can we do to have such colonies in April?

Let us dwell on a few points concerning this question. To determine how to proceed in order to bring about such results depends almost entirely on their management.

Colonies cannot be left unattended to or neglected without endangering their condition. I am a strong believer in a good-sized brood-chamber, for all of our colonies, so they will have sufficient room for two important purposes—plenty of room for brood-rearing, and for a goodly amount of early honey handy to each cluster.

In the cool weather of Autumn, Winter and Spring, they are very much indisposed to separate themselves from the cluster to feed on their stores; sometimes starving by reason of this. I am, and have been, a strong advocate of the breeding up of queens. I consider *purity*, *prolificness*, and vigorous and thrifty propensities, strong points in a good queen. In fact, only such queens will give good results. Docility is very desirable, as we can always handle them in less time, and with much less annoyance.

To obtain all these qualities requires study, work and perseverance; and I tell you this additional work pays every time. To have strong and thrifty colonies in the Spring, is a boon to every bee-keeper.

The quality of our queens, in a great measure, determines the condition of the colonies the greater part of the year (*Spring* being the most critical time), and also determines the amount of our honey crop. Such queens can be depended on far better for keeping the brood-chamber crowded with brood through the season, and they are a great deal more apt to keep up brood-rearing until late in October.

Now, it must be remembered that the age of the worker-bee determines the amount of honey it gathers, and also the amount of honey it consumes in the secretion and production of wax scales necessary for comb-building.

During the honey season they are occupied in this work, and they die off at four to six weeks from the commencement of their season's work. Thus it is, that so much brood-rearing is a necessity previous to and during the honey season.

After October, they get but little honey, and it is thus that all bees hatched out after October live from five to seven months. But some seasons it is so dry in August and September that brood-rearing nearly ceases, and to overcome this difficulty, and keep up brood-rearing until the proper time, I would stimulate them regularly, and often enough so the queens would be content with stores coming in sufficient for the purpose of keeping up brood-rearing the required time. The domestic duties of the queen naturally keep pace with the amount of fresh forage coming in, so necessary for the brood.

It should be remembered, that if any colonies have stupid, unprolific queens that feed, and time is virtually thrown away. Few bee-keepers know how much time is lost and money thrown away by tolerating feeble and impotent queens.

Such colonies are particularly noticed by their owner in the Spring, and perhaps he may discover many colonies in poor and bad condition; some few in numbers; some having a sickly appearance, and hardly able to crawl over the combs—queen, if any, not able to move about, combs much soiled with their excrement, and perhaps legions of imperfect and very inferior drones, and no queen, but instead a few cohorts of laying workers.

Well, what are such colonies good for? Only their combs are of any practical use, and if the hive is cleaned, combs washed and brushed up, another swarm put onto it, is the most profitable thing to do.

Friends, did you ever see such a condition of affairs? Perhaps I have described it so minutely that you conclude I have had such experience. Well, I have had some experience of this kind, and I have tried to profit by it, perhaps as much as any man in Wisconsin, and I can assure you I *have* profited by it materially.

Spring dwindling is a great source of annoyance, and it tries the patience, no doubt, of any bee-keeper who has been troubled by it. Then, should we not turn our attention to more care in the breeding of our queens? Assuredly that is the remedy. It should be done whenever needed, and remember that the breeding season is the time to attend to it.

But there are evils that cause spring dwindling, that for this occasion we do not intend to overlook. It has been, and to some extent now is, the practice of some bee-men, after taking a goodly surplus from the upper stories, to be greedy enough to ransack the brood-chamber for all white honey, depending on their filling up with late, dark honey.

It is a trite saying, that bees will thrive on *any* pure honey; but I tell you this is a grand mistake; a mistake that has brought recorded sorrows to many bee-keepers.

Note carefully what I now tell you: Early honey, such as white clover and basswood, always has a *healthful* and *pleasant* odor, while most of our late honey is dark, and of strong odor, which is unhealthful for the bees; and especially if such honey is unsealed, it is more apt to remain liquid, and this condition induces disease.

I would not say that white clover and basswood honey is absolutely safe food for bees to winter on, but I will say that either, or both, is the safest food for them that I know of, and I have had a long and extensive experience, by which I am convinced of this fact. And while I would not say that bees cannot thrive in exceptional cases on dark, late honey; yet I do say that, as a rule, our late, dark honey is *not* to be *depended* on; neither is it healthy for the bees to winter on.

Honey-dew, which forms on the leaves of oak and hickory in August, by a peculiar state of the atmosphere, has been known to a certainty to be the cause of great fatality among bees, and such should be taken from them as fast as they store it. I do not class this as a real honey, because it is not produced by any plant, but is simply an atmospheric production.

I think buckwheat and other late honey is all right for stimulating purposes. We generally stimulate in the Spring, and it is immediately consumed, and its odor does no harm.

Successful wintering of bees includes their going through the Spring all right, and to attain this result certain rules are observed. They should be quilted in such a way that the dampness of their breath will be absorbed, and their normal heat retained.

Dampness is the cause of moldy combs, and mold is a source of disease; therefore guard against such things, and save loss. Do not permit the air of the bee-room to become foul, or dead bees to accumulate on the floor, or at the entrances to the hives.

Before closing, permit me to arouse your mental faculties a little: I have pointed out many practical methods for the wintering of our bees, and a few literary suggestions, perhaps, will not come amiss.

By expanding our thoughts in making our calculations for the future, we will be very likely to improve in many things pertaining to successful bee-keeping.

Experience is what we all need; and it takes time to acquire experience. You may ask, "What is the first thing to be done?" Do considerable thinking about your bee-prospects, and if you have not already secured some good bee-books, and a good bee-periodical, then get them at once, study them well, do some more thinking, and then, I believe, you will be inclined to settle down to good rules, and adopt the methods that will lead you to success.

Remember, that study always takes precedence in such matters. That is an essential law of man's nature, and he who sets himself up before the world as being master of a profession that he never studied, would be a very sure victim to failure, and he would not only be a laughable, but a pitiable object.

Men of marked success in the world never relinquish the power of thought or study, because this is the essential part of man. Power of thought places us pre-eminently above the lower beings of the earth. Then, again, I ask, Why not avail ourselves of these rich gifts and put them into practice.

Some of you may ask, "What books and periodicals do you advise us to obtain?"

Well, there are many good books and periodicals on bee-culture, Look over the list and choose for yourselves. See to this part of your work at once, and store up a little more knowledge before the season of action is upon you. Read up all practical rules in the books; study well the proceedings of all conventions, and *do not* forget to attend and participate in the exercises of your home conventions, and soon you will be switched onto the main track that leads to the city of Success.—*Read at the Southwestern Wisconsin Convention.*

Boscobel, Wis.

Comb and Extracted-Honey.

B. C. GRIFFITH.

I was called upon to deliver an address before the North Carolina Bee-Keepers' Association, and send it for publication in the AMERICAN BEE JOURNAL. It was substantially as follows:

For the production of a crop of honey, the first requisite is a strong force of young and vigorous bees at the beginning of the honey-flow.

Geo. E. Hilton says the time to put on sections is when the raspberry comes into bloom, and from this I judge the time for us is when the blackberry begins to bloom—last year to the contrary notwithstanding. Keep all the colonies strong, is the watchword, if you wish to gather honey; and another thing is to have a good queen in the colony laying eggs by the thousands. A poor queen, a poor colony of bees; results, no honey.

The combs should be filled by the bees and "cap shut," as the Dutchman called it, before the honey should be extracted, as this capping is evidence of ripe honey. If taken from the combs before ripe, it may ferment and be a vinegar crop, instead of honey.

The extractor was invented in 1865, by Maj. de Hruschka, of Dolo, near Venice, Italy. He first discovered it by giving to his son a piece of comb-honey on a plate; the boy put the plate in his basket and swung it around him like a sling. The father noticed that some honey had been drained out by the motion, and came to the conclusion that combs could be emptied by centrifugal force. The bee-keeping world hailed this invention with delight.

A. I. Root. of Medina, O., claims to have extracted the first ton of honey ever taken from one apiary, with the extractor. From that time to this the extractor has been manufactured and scattered to all parts of the world. In almost every hamlet, the extractor can be heard singing its song (a land flowing with milk and honey), on autumn evenings. While the extractor has been the means of saving many tons of honey, yet I am convinced that there are tons upon tons lost for the want of bees to gather the precious nectar.

Nothing is added to it, and nothing taken from it, but the comb. It is not the old-fashioned "strained honey" of our grandfathers, which was obtained from brood-combs mashed up with dead bees, pollen and dirt, and then strained through an old mill sack. But it is the pure (liquid) nectar, gathered from the flowers by the bees, and carried to the hives by them, which will give health to the body, force to the mind, and strength to the intellect of those who use it.

It should always be kept before the consumers of honey that its granulating is a guarantee of its purity, and if they desire to liquefy it, that it can be done by placing the vessel in warm water, gradually increasing the heat until it becomes liquefied. But great care must be exercised in heating honey, as there is danger of injuring it.

During the past season I extracted some before thoroughly ripe, and it began to ferment; I put it into a large tin boiler to heat over a very slow fire, aiming to heat just sufficiently to evaporate it, but before I was aware, I came near spoiling 60 pounds of honey, though we used it at home. So you see it is a careful job, and must be performed with prudence.

Griffith, N. C.

Apicutural Notes from Nebraska.

J. M. YOUNG.

Three hours of slow rain yesterday has put the ground in excellent condition for planting and cultivating.

The season so far is encouraging for a good honey crop this year.

The apple bloom furnished considerable honey for brood-rearing, and now the hives are becoming crowded with bees.

The new Benton cage, for shipping queens, is a success. This cage seems to be an improvement over all others. The plan of introducing by letting the bees eat the candy out and releasing the queen, can be pretty well depended upon in nearly every instance.

I have ordered a few of the dovetailed hives, and, to say the least, they are handsome, and think I shall use quite a number of them the coming season. Will state at some future time just how I succeed with them.

Not a single case of foul-brood has ever come to my notice in this locality, and, to state the facts, will say that I never saw a single colony effected with it. My mind has been made up for a long time just how to cure it if a case of it should appear, and that is to burn every particle of it—bees, hives, and all.

Plattsmouth, Nebr., May 16, 1891.

Ionia, Michigan, Bee-Keepers' Convention.

HARMON SMITH.

The Ionia Bee-Keepers' Association met in Ionia, Mich., on Wednesday, May 6, 1891.

The convention was called to order at 10 a.m., by President A. N. Hall.

President Hall appointed Jacob Moore and W. W. Penney a committee to examine and report on exhibits.

The Secretary and Treasurer presented his report, showing a balance of $2 in the treasury.

Adjourned until 1 p.m.

AFTERNOON SESSION.

The convention was called to order at 1 p.m.

Proceedings were opened with a song by Mrs. Harmon Smith, accompanied by Miss Josephine Pickett, on the organ, and the convention was favored with instrumental music by these ladies, at intervals during the afternoon.

Mr. W. Z. Hutchinson, editor of the *Bee-Keepers' Review*, of Flint, was introduced and delivered an address on

Increase, its Management and Control.

There are two classes of bee-keepers who desire to prevent increase in the number of their colonies. The first, and by far the larger class, own only large home apiaries, and prefer surplus to increase. This class can allow swarming if, by some simple manipulation, the number of colonies can be kept the same, and the bees induced to devote their energies to the storing of honey. The other class are possessors of out-apiaries; and they desire not only to prevent increase, but to suppress swarming. This accomplished, the apiaries can be left alone, except at stated intervals.

In reply to the question, "Why do bees swarm?" it has been replied that, "It is natural," "It is their method of increase." This may be true in part, but it is not a satisfactory answer.

I have never known a season to pass in which all of the colonies of my apiary either swarmed or did not swarm. One year I had 75 colonies. They were worked for comb-honey. Forty of them swarmed; 35 did not. It would have been just as "natural," just as much "according to nature," for one colony to swarm as for another.

In *Gleanings* for 1889, there was quite a lengthy discussion in regard to the causes that lead to swarming. The gist of the discussion seemed to be that an undue proportion of young or nurse bees to the brood to be nursed was the prime cause of swarming.

If the brood-nest be well filled with brood, then for lack of other room the bees begin storing honey in the cells from which the bees are hatching; the result is, that soon there is but little brood to care for compared with the number of nurses, or young bees. This theory is strengthened by the fact that when bees are given an abundance of empty comb in which to store their honey, swarming very seldom occurs. In short, extracting the honey, or, to be more exact, giving plenty of empty comb, is the most successful, practical method of controlling increase.

In large apiaries, especially out-apiaries, that can be visited only at intervals, it is well-nigh impossible to keep every colony always supplied with empty combs, hence there will be occasional swarms. If there is to be some one present to hive what few swarms do issue, and prevention of increase is desired simply that the amount of the surplus may be greater, and the surplus is preferred in the extracted form, then the man with these desires can have them gratified.

In the production of comb-honey, I doubt if there is a profitable method of preventing swarming. It may be discouraged by giving as much surplus room as possible; but foundation does not equal drawn comb as a discouragement to swarming. The issuing of after-swarms can be prevented, but the best that can be done with first swarms is to let them come, and then so manage as to make the most of them.

When the season for surplus honey closes with clover or basswood, it is better not to try to secure surplus from both the parent colony and the swarm. Hive the swarm upon the old stand, transferring the supers from the old to the new hive. If the brood-chamber of the new hive is not too large, work will be at once resumed in the sections.

Place the old hive by the side of the new one, but with its entrance turned to one side. That is, have the rear ends of the hives nearly in contact, but their entrances perhaps two feet apart. Each day turn the entrance of the old hive a few inches toward that of the new hive. At the end of the sixth day the two hives should stand side by side. Practically, the hives are on one stand. True, the bees of each hive recognize, and enter their own home, but remove either hive, and all of the flying bees would enter the remaining hive.

Usually the second swarm comes out on the eighth day after the issuing of the first. Now, if the apiarist will, on the seventh day, about noon, when most of the bees are a-field, carry the old hive to a new location, all of the bees that have flown from the old hive since the issuing of the swarm, that have marked the old location as their home, will return and join the newly-hived swarm. This booms the colony where the sections are, and so reduces the old colony, just as the young queens are hatching, that any further swarming is abandoned. The old colony just about builds up into a first-class colony for wintering. If there is a Fall honey-flow, such a colony may store some surplus then.

This method of preventing after-swarming, called the Heddon method, is not infallible. If a colony swarms before the first queen-cell is sealed, the first young queen may not hatch until the old colony has been upon the new stand long enough for a sufficient number of bees to hatch to form a swarm, when they may swarm; but as a rule, this is a success.

If the bee-keeper desires no increase, let him pursue the plan just given, for the prevention of after-swarming until the point is reached where the old hive is to be carried to a new location, when the old hive is simply to be shifted to the opposite side of the new hive, with its entrance turned away as in the first instance. Each day the hive is to be turned slightly, as before, until the hives are again parallel, when, at the end of a week from the time the "shift" was made, the hive can again be changed to the other side of the new hive.

By this management, the young bees that are continually hatching in the parent colony, are being enticed into the hive containing the swarm. At the end of the third week, the combs of the old hive will be free of brood. That left by the old queen will all have hatched, while the young queen will not have been laying more than two or three days at the most. The few remaining bees can now be shaken from the combs of the old colony and allowed to run in the new hive.

If there is any choice of queens, the apiarist can kill the one that is the least desirable; otherwise he can allow the queens to settle the matter themselves. I prefer the latter course. What little honey is left in the combs may be extracted, and the combs, unless there is some immediate use for them, stored away, and close watch kept over them, that they are not injured by the bee-moth's larvæ. I do not like the plan of putting the brood-combs of a colony from which a swarm has issued, upon some other hive, the cells being filled with honey as fast as the bees hatch. There seems to be no good plan of allowing bees to swarm and then preventing increase by uniting, without having an extra set of combs built for each swarm that issues, but I believe such combs are produced at a profit.

There is still another plan of preventing increase besides that of merging the old colony into the new; it is that of contracting the brood-nest of the newly-hived swarm to such an extent that the end of the season will find it too reduced in numbers for successful wintering, when it may be united with the parent colony.

I do not wish to be understood as saying, or even intimating, that there are no other methods of preventing or controlling increase. There are several. But it is not always a question of what can be done, but if it can be done profitably? Some have practiced, and reported favorably, the plan of allowing a swarm to return to the old hive, then removing the queen, and aftewards cutting out all the queen-cells but one. It has this in its favor: The colony is re-queened; but, as an offset, there is the labor of cutting out the cells, with the possibility that one or more may be overlooked, or that the one left, may not hatch.

With the prices at which honey sells, there must be as little of this "puttering" work as possible. The cutting out of queen-cells, handling of combs singly, changing them about, etc., must be dropped for more wholesale, short-cut methods. There must be more handling of hives, and less manipulation of combs.

For some reason, a colony with a queen of the current year seldom swarms. Perhaps one reason is that her vigorous laying does not allow the bees to crowd her out, and thus reduce the amount of brood compared with the number of nurse bees. In order to be effective, the young queens must be introduced early in the Spring, before there are any preparations for swarming. It is difficult to rear queens so early in the season, and expensive to get them from the South.

Quite a number of bee-keepers have succeeded to their satisfaction, in preventing after-swarming, also in preventing increase, while but very few have succeeded in preventing swarming. Probably the only certain method that has been used to any extent in this country, is that of removing the queens just at the opening of the swarming season, leaving the colonies queenless about three weeks. Of course, queen-cells must be cut out at least twice during this interval. Although a few good men practice this method, I never could bring myself to adopt it—there is too much labor.

I have said nothing in regard to making increase artificially, because, unless there is a desire for unusual increase, or to leave the apiary unattended, I think natural increase is preferable. One difficulty in dividing bees to forestall swarming, is that all colonies are not ready for division at the same time. There is danger of waiting too long or of dividing too soon.

The man who is producing honey as a business, will find it to his advantage to allow each colony to swarm once, if it will (and no more), then make the most out of a swarm. Whether the swarm and old colony shall be again merged into one, depends upon the desirability of increase.

This was followed by interesting remarks by Mr. Abner Brown, of Lansing, a practical bee-keeper of long experience.

The Committee on Exhibits made the following report:

Jacob Moore, Ionia, 1 bee-hive.

Mrs. M. E. Thomas, Ronald, 1 can honey.

C. H. Ford, Ronald, 1 crate comb-honey.

Abner Brown, Lansing, 1 bee-feeder, 11 vials of honey, from different sections of the United States.

H. M. Lewis, Ionia, 1 case extracted-honey.

Harmon Smith, Ionia, novice honey-extractor, family favorite honey-scale, 10 bee-papers, 2 shipping-cases for extracted-honey, 4 dozen cans of extracted-honey, Dr. Tinker's sections and zinc, Van Deusen's foundation, Root's foundation, Dadant's foundation, 3 samples of sage honey and cases.

H. B. Webber, Ionia, 1 Clark and 1 Bingham smoker.

The election of officers resulted as follows:

President, A. N. Hall, Ionia.

Secretary and Treasurer, Harmon Smith, Ionia.

On motion of Harmon Smith, the following resolutions were adopted:

Resolved, That we do most respectfully petition the Honorable Legislature of Michigan to incorporate in their appropriation for the forthcoming World's Columbian Exposition, at Chicago, such sum for the purpose, and as shall be adequate to give the bee-keeping interest of the State its due and proper representation in said Exposition.

Resolved, That it is our opinion that the bee and honey exhibit of North America should be grouped together, each State and Province by itself, so as to make one grand "sweet" show.

Resolved, That our thanks are due to W. Z. Hutchinson, editor of the *Review*, for his instructive address, and to Abner Brown, of Lansing; to the press, for its kindly notices; to the ladies for their music; to the W. C. T. U. for the use of their rooms, with a blessing for their cause; to our exhibitors for their efforts in making a display at this meeting.

The reports of those present show that the Winter and Spring losses are about 5 per cent., and the present prospects good.

The convention then adjourned to meet in this city on Sept. 15 next.

The attendance was the largest known in the history of the society, and the increased interest is very encouraging to those concerned in its success.

Ionia, Mich.

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Detecting Adulteration in Wax.

We detect adulteration by the smell, and by chewing the wax. Beeswax and tallow will make very fair chewing-gum. But wax alone will crumble all to bits, and cannot be chewed—at least very long.

The addition of paraffine has somewhat the same effect; and even a very little paraffine makes the wax melt at a much lower temperature, so that it is entirely unfit for foundation.

If the sample in question should, with very mild heat, become soft and mushy, you may suspect paraffine.

Beeswax, however, is tough and leathery, and easily rolled at a temperature where paraffine would have no toughness at all.—*Gleanings*.

CONVENTION DIRECTORY.

Time and place of meeting.

1891.
June 2.—Des Moines County, at Burlington, Iowa.
John Nau, Sec., Middletown, Iowa.

Aug. 6.—Rock River, at Sterling, Ills.
J. M. Burtch, Sec., Morrison, Ills.

Sept. 3.—Susquehanna County, at So. Montrose, Pa.
H. M. Seeley, Sec., Harford, Pa.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

North American Bee-Keepers' Association

PRESIDENT—P. H. Elwood....Starkville, N. Y.
SECRETARY—C. P. Dadant.....Hamilton, Ills.

National Bee-Keepers' Union.

PRESIDENT—James Heddon ..Dowagiac, Mich.
SEC'Y AND MANAGER—T. G. Newman, Chicago.

Bee and Honey Gossip.

☞ Do not write anything for publication on the same sheet of paper with business matters, unless it can be torn apart without interfering with either part of the letter.

Flattering Prospects.

My bees are in good condition, after wintering on the summer stands; loss only 9 colonies, 4 of which were queenless. I keep from 90 to 120 colonies, and produce both comb and extracted-honey. White clover is beginning to bloom, and bees will be booming in about ten days. Prospects are flattering.

J. DOTY.

Galt, Mo., May 16, 1891.

Clover Promises Well.

I notice that by most of the leading lights in apiculture, Query 765 is answered in the negative. I take affirmative grounds on this question, but would use neither gloves nor mittens, but for protection for the hands I use a pair of half-hand mitts, made out of an old pair of stocking legs. Take a pair of stockings, cut off the feet through the upper edge of the heel, hem them and fit them to the hand by sewing around the fingers so as to leave the fingers and thumb exposed, and fasten to the sleeves with safety pins. They are cool, but very little in the way, and you have no trouble from bees on your wrists, nor crawling up your shirt sleeves. With me, these mitts take rank alongside of the smoker and a good bee-hat, as articles which are indispensable in an apiary. Bees in this part of Illinois are in splendid condition for the clover bloom, which now promises wonders.

HENRY STEWART.

Prophetstown, Ills.

Alfalfa Pasturage.

Two years ago I began bee-keeping with 3 colonies, and now have about 40. Am located in the midst of several thousand acres of alfalfa, in consequence of which I obtain an abundance of alfalfa honey, without the bees going far—probably not more than half a mile. This honey is of the best quality, far superior to any other product in this market, and sells readily. I have gained many valuable points from the AMERICAN BEE JOURNAL, and enjoy the different ideas advanced.

Denver, Colo. S. W. SPRAGUE.

Spreading the Light.

Since my arrival here, three years ago, I have succeeded in convincing several of my bee-keeping neighbors that it would pay them to subscribe for a bee-periodical, and they have abandoned the box-hive, log gums, black bees, etc., and invested in movable-frame hives and the gentle Italian bees.

A. M. HOYLE.

Whistler, Ala., 1891.

Heavy Losses of a Bee-Keeper.

I have about the only bees kept in this immediate vicinity, and I came very near having none. I put 74 colonies, mostly strong ones, into winter quarters in good order, but for reasons unknown, only a few more than half survived the Winter. My cellar seems to be perfection, and those that did well were fine when taken out, but my number is reduced to 24 colonies, although they have had all the honey they could consume. The season is very backward, with cold, dry, north winds, and forest fires raging as never before known here. At times the smoke makes it dark at mid-day, it is suffocating to breathe, and terrible upon the eyes. The loss of my bees, however, is but a drop in the bucket. The fire has cleaned out my summer's run of logs, and destroyed many thousand dollars' worth of valuable timber, until I now can class myself with poor men. The only bees that did well last Winter were those that were under the treatment of my New Idea, and they still survive. The present prospect this season, here, is very poor with bees, as well as agricultural produce, and the timber of Northern Michigan has been badly riddled by fire.

F. D. LACY.

Nirvana, Mich., May 17, 1891.

Very Little White Clover.

We have never had to feed bees so much in the Spring as we are doing now. Apples blossomed very sparingly, but the pear, peach and cherry bloom was quite profuse. There is very little white clover here, compared with former years.

MRS. L. C. AXTELL.

Roseville, Ills., May 18, 1891.

New Comb-Honey.

The weather is glorious, and the bees are gathering honey very fast. On last Tuesday I took off 2 frames of new honey—the first of the season. They weighed 8 pounds each. Bees are not swarming much, as I use large hives.

G. B. CARTMELL.

Jackson, Tenn., May 15, 1891.

Fruit-Bloom Honey.

This Spring has furnished the most bountiful harvest of honey from fruit blossoms that I have known during the last ten years. All the strong colonies are simply rolling in the honey from morn to eve, and I keep close watch for preparations for swarming, and not in vain, as cells were started in several hives. The Spring was very late and cold, with many cloudy, rainy days, but for the past twelve days there has been continuous sunshine. Almost every season fruit bloom is accompanied by gloomy weather, so that the bees are confined to their hives nearly all the time. Present prospects are that the season will be a dry one. While the dry weather we are having now does not interfere with the honey yield from fruit blossoms, it is going to cut off our clover yield very much, if not entirely. We need rain now, and must have it or clover cannot grow.

C. W. DAYTON.

Clinton, Wis., May 16, 1891.

Loss Ninety Per Cent.

I put 71 colonies of bees in the cellar last Fall, and on taking them out April 27, found 69 colonies living. I united several colonies until they now number 62. Found no sealed brood, except in one or two colonies. The Spring has been very backward, and this morning the ground was white with snow, and ice had formed ⅛ of an inch in thickness. As Vice-President of the Vermont Bee-Keepers' Association, I have received reports from 11 small apiaries, containing 4 to 15 colonies each, and 90 per cent of the bees are dead; 4 colonies being the most any one of them have left. My bees are looking finely, and if frost does not kill the basswood bloom, I expect a large yield of honey.

M. F. CRAM.

West Brookfield, Vt., May 18, 1891.

Injured by Frost.

On April 22 I arrived here from Michigan. Cherries and peaches were just beginning to bloom, and the bees did splendidly while they lasted; following them came the buckeye and apple bloom, and although we had several frosts, they did not do much damage until May 16, when the weather became very cold, and ice formed one-fourth of an inch thick. Peaches and cherries were as large as peas. Fruit of all kinds is killed, and I think that wheat and oats are badly injured. It is very dry here, and the prospects for a honey crop are quite poor. There will be nothing for the bees until white clover and basswood bloom comes, and I fear they are injured. We shall have to feed our bees for some time, but they are strong, and have plenty of brood. At my old home in Michigan the bee-keepers fared worse than we did. I am very much discouraged, but we must look on the bright side.

L. REED.

Havana, Ohio.

Foundation from Foul-Brood Combs.

I wish to say a few words about comb-foundation made from foul-brood combs. I have bought and used such foundation, and no evil results followed its use, and I would as soon use it as any other foundation. I have had an experience of 18 or 20 years with foul-brood, and have no trouble in curing it. One apiculturist whose bees I cured of the disease last Fall, had 18 or 20 colonies badly affected with foul-brood. He got, I think, 20 pounds of Dadant's foundation last Summer, and to-day I cannot find a single cell of foul-brood among them. They wintered well, and are strong, with plenty of young bees, and full combs of brood. I have taken charge of 6 colonies belonging to another apiculturist, and am working with them. It can be depended upon, that wax that has been well heated two or three times will not contain any living germs of foul-brood. This is intended to corroborate the statements of Messrs. Dadant, Root and Hunt, recently published in the BEE JOURNAL on this subject. D. D. DANIHER.

Madison, Wis.

Building Up Rapidly.

My bees wintered well without any loss, and are building up very fast. When the fruit trees were in bloom, they could work on the blossoms almost every day. The drones are now flying, and I expect some swarms soon. White and alsike clover promise well. C. SCHRIER.

Peotone, Ills., May 21, 1891.

Ready for the Swarms.

The first drones I have seen this season were flying to-day. My bees will begin to swarm in a few days, and I will be glad when they do, as I am ready for them, having been making hives all Winter. A. J. C. PETERSON.

Dicks, Mo., May 14, 1891.

Alfalfa in Utah.

Alfalfa, or lucern, as it is called in Utah, is a splendid honey-producing plant—in fact, there is no plant that beats it in this respect. I have sent you a sample of lucern honey. In this climate we have no trouble in starting it. I have 12 acres on which I never sowed a pound of seed. My meadow is on the high ground of my farm, and the alfalfa goes to seed on the banks of the irrigating ditches, the seeds fall on the water, and are carried by it out on the land, and in that way it is spread so that I have to grub it up to keep it from covering my whole farm. When I do sow it, I put from 15 to 20 pounds to the acre. It will produce four crops a year here, yielding from 1 to 1½ tons of hay per acre. It is not like white clover, depending on rain, for after it gets started, the roots run deep into the ground. I think the roots will reach a depth of 4 feet the first season. I have seen it in California with roots as large as a lead pencil, and reaching a depth of 20 feet. O. W. WARNER.

Moab, Utah.

[The sample is received, and is of good body and flavor.—ED.]

Do Your Duty.

This is a progressive age, and the bee-keepers of the Western World are the most progressive on earth. But there are things in which they are sadly deficient, and one is the requisite amount of nerve to do the proper thing at the proper time. There is a special duty that should be performed *now*, and that is every bee-keeper should join the Bee-Keepers' Union without delay.

Buffalo, N. Y. J. W. TEFFT.

Working on Poplar Bloom.

The weather is very cool at present, and the bees cannot work more than half of the time. There is still plenty of poplar in this vicinity, despite the fact that the saw mills have been working it up into lumber for the past five or six years. It has been in bloom for two weeks, and the bees are booming on it to-day. There is no tree in the United States that produces half as much honey as the poplar. Some years it produces so much nectar that the flowers are full to overflowing, and the nectar falls upon the leaves and stones beneath. If the season is dry and hot, the nectar will dry in the blooms, in the form of small, thin cakes. My bees are in range of Smoky Mountain, and while they are working on the sides of the mountain, the top is white with snow. On page 612, I am made to say that I have 16 colonies of bees, when it should be 61 colonies. SAMUEL WILSON.

Cosby, Tenn., May 14, 1891.

[The error occurred through the simple transposition of the figures, as can be seen at a glance.—ED.]

Bee-Keeping for Profit, by Dr. G. L. Tinker, is a new 50-page pamphlet, which details fully the author's new system of bee-management in producing comb and extracted-honey, and the construction of the hive best adapted to it—his "Nonpareil." The book can be had at this office for 25c.

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ALFRED H. NEWMAN,
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We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

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Bee-Keepers' Review	2 00	1 75
The Apiculturist	1 75	1 65
Canadian Bee Journal	1 75	1 65
American Bee-Keeper	1 50	1 40
The 7 above-named papers	6 00	5 00
and Langstroth Revised (Dadant)	3 00	2 75
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Binder for Am. Bee Journal	1 60	1 50
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	2 20
Western World Guide	1 50	1 30
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Do not send to us for sample copies of any other papers. Send for such to the publishers of the papers you want.

◆

If you have a desire to know how to have Queens fertilized in upper stories, while the old Queen is still laying below—how you may *safely introduce* any Queen, at any time of the year when bees can fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact, everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and is as interesting as a story. Price, $1.00. For sale at this office.

◆

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THOMAS G. NEWMAN,
EDITOR.

Vol. XXVII. June 4, 1891. No. 23.

Editorial Buzzings.

There are as many lovely things,
 As many pleasant tones,
For those who sit by cottage hearths,
 And those who sit on thrones.

The Punic Bees very seldom sting, but they are not stingless bees.

Tea Leaves, in a pan of water, is advised by an English apiarist, to be provided at drinking places for bees.

Dark Colors should be avoided when painting hives. The combs will melt down more quickly in such hives, during the warm Summer weather.

The Injury to fruit, which is sometimes charged to the bees, begins with decay, birds, wasps, or other pilferers, for bees never puncture the sound skin of fruit.

In Sanilac County, Mich., it is reported that there are over 200 bee-keepers. The honey crop of that county is valued at $60,000. That shows that the bee-keepers are progressive, and up with the times.

Justice asks, "Why should bees be taxed, and poultry escape taxation entirely?" We give it up. Either both should be taxed to defray the expenses of the Government, or neither should be compelled to do so!

Mark with Ink any articles you may want us to see in newspapers sent to this office. Otherwise, the item you desire to call attention to may never be discovered. We receive so many papers that it would be utterly impossible to read them all through to find an item.

The Poet vainly asks: "How doth the little busy bee improve each shining hour?" Well, judging from its everlasting buzzing, and its constant use of the comb, we should say that the bee put in its shining hours running a barber shop. Next!

Sections of the regular sizes can be obtained at all times, but those who will use sizes out of the ordinary run (that is 4¼x4¼, or 5¼x6¼), should have had them made, and in their apiaries long ago. Mills cannot stop now to change their machiney to run *odd sizes.* This shows the folly of using odd sizes of sections or frames.

"Excluder Zinc" is what it is called in England, when mentioning what we call "perforated zinc" for excluding queens and drones. The editor of the *British Bee Journal* (on page 176) says: "The most perfect form of excluder we know of is that......made by Dr. G. L. Tinker." It is now being made and sold in England, as advised by Mr. Cowan.

Annual Reports of the different agricultural associations in every State should be printed and circulated at public expense. In Indiana, Wisconsin, and some of the other States, such has been done for many years, and books of from 500 to 1,000 pages are published every year, giving the reports of the various societies—including the essays and discussions—so that those engaged in all the agricultural pursuits may have them in their libraries for convenient reference at all times.

In Illinois it is intended to have all the State associations meet at Springfield at about the same time (as they do in Indiana, Wisconsin, and other States), and the Bee-Keepers' Association will meet there like the others; their reports will all be published, either together or separately. If the latter, then a bill now before the Legislature, if enacted, will provide the means of publishing our report.

The following item among last Thursday's telegraphic news, shows the present condition of that bill. It reads thus:

> The bee and honey industry received the attention of the House for a half-hour this morning. On motion of Mr. Hambaugh, the bill making an appropriation of $500 to publish the reports of the Illinois Bee-Keepers' Association was renewed, and was ordered to "third reading."

◆

Canton, Ills., as stated on page 533, has had its sensation—a lively bee-nuisance case—and, as might have been expected, the Justice of the Peace decided it against Mr. Geo. W. Cole, and assessed a fine of $1, and costs of $21.70. It is quite essential that a decision should be reached by the Supreme Court of Illinois on the question of whether bee-keeping can be declared a nuisance, or not, in incorporated cities. This case will furnish the opportunity, and the National Bee-Keepers' Union will give the requisite assistance to do so, if it becomes necessary.

Honey-Dew is reported to be quite plentiful. Prof. A. J. Cook, on May 29, wrote thus:

> Bees are gathering honey-dew quite rapidly now from the *aphides*. These insects are very numerous.

Great care should be taken not to allow any of it to be stored in the sections. If such stuff should by any accident be put upon the market, it would not take very long to destroy that market for comb-honey. It is not honey, and to call it "honey-dew" is a misnomer.

◆

We Now Have another *Bee-Keepers' Review* besides that published by Brother Hutchinson. It is published monthly in Weixelburg, Austria, and began with the year 1891. It has 12 large pages, and is published by Philipp Rothschutz.

◆

Stung in the Eye.—A subscriber asks the following questions:

> 1. Would it not be very dangerous if a bee should sting a person right on the eye ball? Would there not be danger of losing the sight in that eye forever?
> 2. Would a colony of bees stay and do well in a hive that had glass on both sides and ends of the lower story?

1. The eye can be destroyed by a bee-sting, yet people have been stung on *some parts* of the eye ball and soon after perfectly recovered.

2. Bees are not contented in a hive which lets in much light.

◆

The Bronze Medal is just received for our exhibit at the Paris Universal Exposition in 1889, and with it a lithographed Diploma, 24x30 inches in size. They have been a long time in getting around, but are welcome nevertheless.

◆

Quite True.—The man who advertises to sell something for nothing always intends to get something for nothing.—*Western Rural.*

Duty on Queen-Bees.

It is amusing to notice some of the remarks made by the daily newspapers concerning the recent decisions of the Treasury Department to collect customs duty on imported queen-bees. Here are a few of such, which may cause a laugh:

> There is a tariff of 20 per cent. *ad valorem* on Italian queen-bees (mothers), but Sicilian pa-drones are on the free list.—*Detroit Tribune.*

> The decision that Italian queen-bees cannot be admitted to the United States free of duty because they have no pedigree, and are not entered in any register, is a blow at dago royalty. It would cause no regret if the rule were applied rigorously to other importations from Italy.—*Detroit Free Press.*

> Considering the usefulness of queen-bees, it seems an unjust discrimination that imposes a duty upon them before entrance to this country, and admits members of the Mafia free. If it were not for the latter fact it might be thought that the bees were barred because they are known to carry stilettos. —*Indianapolis Journal.*

> The Treasury Department has decided that queen-bees sent through the mails from Italy to a purchaser in Iowa are liable to a duty of 20 per cent. *ad valorem.* Under the fine-drawn provisions of the McKinley tariff, the exemption heretofore accorded to animals intended for breeding purposes cannot be made to cover queen-bees. Those royal insects have no recorded pedigree. McKinley insists on a pedigree, or in default, the payment of a fine.—*Philadelphia Record.*

> The customs collector at New York has been authorized by the Treasury Department to order the release on the expected arrival there of a shipment of Italian queen-bees, sent through the mails from Italy to a citizen of Iowa, upon the payment of a fine equal to the duty due thereon.
>
> Under the act of March 3, 1883, queen-bees were held to be exempt from duty under the provision for animals, especially imported for breeding purposes. The tariff law of 1890, however, excludes from these privileges animals not usually recorded in special books and pedigrees, and consequently renders these bees liable to duty at 20 per cent. *ad valorem.* The importer was not aware of the new provision of law when he ordered the shipment above referred to, and he will have to pay the duty due thereon.—*Telegraph.*

> Bee-keepers complain that the McKinley tariff bill has put a duty of 20 per cent. *ad valorem* on queen-bees imported into this country. Bees are live animals, and hence come under the provisions of the act. They have no registered pedigrees, so cannot squeeze in as "animals imported for breeding purposes." The Secretary of the Treasury has been appealed to, but the provisions are so strict there is no loop hole big enough to let even a queen-bee come in.—*Michigan Farmer.*

Swarming peculiarities are thus questioned by Thomas Hill, of Young's Creek, Ind. :

> 1. Why do bees fill the hive and sections with honey, and then swarm before capping the honey?
> 2. Why do they sometimes swarm, and then return to the hive again?

1. Bees do not, as a rule, fill the hive and sections before swarming; if they did we could very easily keep them from swarming at all, by seeing that they, at all times, had unfilled room.

2. Because the queen fails to get into the air with the swarm, or after so doing drops down, or the bees are only half-hearted about swarming in the first place, and conclude to give it up.

Queen-Rearing by Doolittle's method is a success in the hands of extensive breeders as well as by novices. John Nebel & Son, High Hill, Mo., on May 25, 1891, write thus:

> We now rear all our queens by the Doolittle method. Last year we reared 800 queens, and nearly all of them were reared as advised by his book. This year we have so far reared about 400, and we would not now adopt any other plan. If any have failed, they must have made bad work in starting queen-cups.

No Railroad Man in the world is more widely known, or more popular, than Chauncey M. Depew. Over the caption of "Our National Orator," a magnificent picture of him is presented on the first page of *Frank Leslie's Illustrated Newspaper* this week.

One-Eyed Bees.—Mr. N. Staininger, of Tipton, Iowa, has sent us a malformed bee, having but one eye, and asked what was the cause of the sport. We sent it to Prof. Cook for reply. His rapturous joy over the monstrosity brought the following, which will be read with much interest:

> A CYCLOPEAN WORKER-BEE. — That does not mean a giant bee, nor even one extra large, but refers to a bee with but one eye. A large crescent-shaped eye, symmetrically placed in the middle of its head.
>
> I have received all sorts of monstrosities among bees, but nothing before like this.
>
> I need not tell you, Mr. Editor, that I was delighted to get this. The bee is in no otherwise peculiar, except, of course, that it has no simple eyes or ocelli. The vertex, back of the eye, is about as wide as the eye, and very hairy. It is a curiosity that would grace any insect cabinet, and delight any entomologist. I wish Mr. Staininger would carefully look over the bees of this colony, and see if he does not find some more.
>
> I think such malformations come from some abnormal condition of the queen, and, if so, the finding of one would suggest the probability that more were at hand.
>
> I am pleased for another reason, to find such unique examples. They argue a very observant bee-keeper. The very nature of apiculture tends to make its patrons close observers, and it takes sharp eyes to discover such curiosities.
>
> Last year it was our enterprising young friend, J. T. Timpe; now Mr. N. Staininger. Who will it be next?
>
> I hope that Mr. S. can send me some more of these uniques. I hope that he knows the colony from which this came.
>
> A. J. COOK.

The Report of the Secretary of Agriculture for 1890 is on our desk, marked "with the compliments of Secretary Rusk." On page 29 we discover the following, which will be of interest to apiarists:

> The increased appropriation to this division will justify renewed attention to the subject of bee-culture, and plans are being formed to carry on whatever investigations will tend to advance this important industry. The investigations already made under direction of the entomologist, had for their object the control of the fertilization of the queen, whereby bee-keepers would be able to improve the disposition and the honey-producing qualities of their bees by selection, in the same manner in which the stock breeder and the fruit-grower have for so many years successfully improved our domestic products. There is reason to believe that this can be accomplished with reference to the bee; but there are many other ways in which the Department can help the bee-keeper in investigations upon a scale which neither individuals nor associations can afford to pursue. This is especially true in reference to the study and introduction of bee-plants from sections of the country or other parts of the world where they are valuable, into sections where they are not yet known. This applies also to the introduction of bees known to have desirable qualities, as, for instance, the *Apis dorsata* of Ceylon.

Swarming has commenced. A few swarms are reported on page 740, and here is another report, received just as these forms are being closed. Mr. D. McLean, of Delavan, Wis., wrote thus on May 29, 1891:

> My first swarm came out on May 29, from an Italian colony. I have 40 colonies, and all seem to be in fine condition, promising generous increase.

Procrastination. — A word of warning is given in the *Prairie Farmer* by Mrs. L. Harrison, of Peoria, Ills, about having necessary supplies at hand when needed. She says:

> The poet has well said that "Procrastination is the thief of time." This very cunning fellow has stolen much from bee-keepers by telling them, "Time enough yet; wait and see if you need them before ordering hives, sections, etc." Last year many colonies swarmed and emigrated for lack of hives to put them in, and honey wasted for want of sections. Bee-keeping, instead of being a heaven-born pleasure, became a fret and worriment. Factories ran night and day during the busy season to keep up with their orders and then failed. Goods sometimes go astray, and are many weeks in transit, and when they arrive at their destination, the honey-shower is over.

Queries and Replies.

To Prevent Hive Covers Leaking.

QUERY 769.—My hive covers are flat, and made of three pieces of matched pine lumber. What is the best and cheapest way to keep them from leaking? I find that, no matter how well the lumber may be seasoned, the hot sun of Summer will shrink them apart, cause them to leak, and often stain the sections.—Illinois.

Cover them with tin.—M. MAHIN.

Cover with roofing tin.—J. P. H. BROWN.

A faithful use of white lead and oil.—R. L. TAYLOR.

I use a sheet of tin, or a tin roof.—G. M. DOOLITTLE.

Cover with tin. If that rusts, paint it.—EUGENE SECOR.

Keep them heavily painted with white lead, and use sunshades.—J. M. HAMBAUGH.

I do not like such covers. Some cover the tops with tin or zinc, and paint them. That is sure.—A. J. COOK.

Our hive covers are of two pieces of matched lumber, and kept well painted, and we are not troubled with their leaking.—MRS. L. HARRISON.

We use a rough roof over the top. It is very economical and useful, as it saves the hive, and shelters the bees from the hot sun.—DADANT & SON.

Cover them with tin, zinc, or galvanized iron. Cotton cloth, well painted (and kept so), will answer the purpose for a long time.—J. E. POND.

After no little experimenting, I settled on tin for any cover too wide to be made of a single board. It costs more, but it lasts longer.—C. C. MILLER.

Give the covers a good heavy coat of paint, and then run the cracks full of dry sand. After a day or two scrape off the surplus sand, and give them another coat of paint.—C. H. DIBBERN.

Cover each crack with a strip of tin, about 1½ inches wide, laid in paint and well nailed. You can use cotton cloth, laid in paint, with good results if it is well painted.—H. D. CUTTING.

Strips of tin, well nailed down, over white lead paint, as thick as it can be put on, will stop the leaks; but whole sheets of roofing steel (which is cheapest), or of roofing tin, is best.—G. L. TINKER.

No flat cover will protect my hives from slight leakage. I use an over-cover, or shade board, made of rough lumber, and break the joints so as to turn water. In this way my hive covers are protected from sun warp, and the combs are kept dry.—G. W. DEMAREE.

The *best* way is to make them of one piece—I do so. Or, you might use a piece of cloth, and paint over it. I have done this for 15 years where splits or checks compelled me to, in order to save a cover. Paint rots cloth, however. I learned this trick of Ed. J. Oatman, of Dundee, Ills.—JAMES HEDDON.

It is more desirable to have the flat covers of hives made of one piece of seasoned lumber, with end cleats to keep them from warping. When this cannot be done, have the boards well matched, and put together with paint. Then *keep them well painted*, and they will the better endure the heat of the sun.—THE EDITOR.

Sundry Questions.

Sugar Syrup for Winter Stores, Etc.

1. If a colony of bees (in the Fall) have 20 pounds of honey, and it is all taken away, how many pounds of granulated sugar will it be necessary to feed to them to put them in as good condition for wintering as before? 2. Calling ten hours a day, how many pounds of honey ought two men to extract in a day?

A READER.

[1. While I believe that properly-made granulated sugar syrup is not only safer, but will go further, pound for pound in wintering bees than will honey, I should make a rule to give them about the same number of pounds they had before. Another thing, you must remember, there is what may be called silent robbing in all apiaries, and I never fed 100 or more colonies, but what there were several in the apiary wholly destitute after I had finished, and yet no robbing had been seen to take place.

This phenomena must be watched in feeding bees. Probably the best way would be to destroy the colonies that willingly allow their stores to be carried off, and in this way stop the breeding of that kind of bees.

2. This question does not admit of a comprehensive answer, but suggests the following questions before such answer can be given:

What kind of bees?
What kind of hives?
What kind of extractor?
What kind of honey?
What kind of flow?
What method of ripening honey, if any?
What kind of men do the work?

There would be a difference of about ten to one, if all the above were favorable or unfavorable.—James Heddon.]

Not Caterpillars.

Enclosed find a sample of linden leaves from a tree near my house. If those are the larvæ of the caterpillar the crop of worms should be good this year.
Alexandria, Minn. J. M. Doudna.

[These are not caterpillars at all, but galls of the Linden Pdytoptus mites. These are very minute four-legged mites. They work in the teat-like galls, which are on the upper side of the leaves, and open below. From these openings the mites come out and move a little, commence to suck, and so form another gall. These galls are very plentiful on maple, pear, plum, linden, etc. Some of the maple galls are bright red, and quite beautiful. The mites are cylindrical, possess many segments, and lay quite large eggs, considering their very minute size.

They are so small that they can only be studied, or even found, with the aid of a good microscope. I do not think they do very much harm. A very vigorous maple near my house has been fairly covered with them for years. I know of no way to destroy them, but think I could find a way, were they bad enough to warrant it.—A. J. Cook.]

Starters, Spreading Brood, Etc.

1. When full sheets of comb-foundation are not used in the brood-frames, what width of strips is it best to put in; and how is it best to fasten them to the top-bar? 2. Is it a good plan to clip the queen's wings? How should it be done? 3. Does it pay to spread the brood-nest in the Spring? 4. Which is the best way to have the hives in the apiary; in rows or scattered about? L. O.

[1. Foundation guides in the frames are worth more to me when three or four cells wide, than when as many inches in width, and I would prefer the narrow ones at the same price. The reason is this: They have no wires to hold them in place. The top is held absolutely perfect, and all of the piece will be so, too, if very narrow. If wide, the bottom will be wavy, and so will the comb in general, after it is all finished. About three or four cells wide is best. The best way to fasten it to the top-bar is to have the bar smooth, and the wax at 100° temperature, then mash the foundation with a putty knife, dipped in honey, or a mammoth Parker foundation fastener, made for brood-frames. With the putty knife, 75 an hour can be put on. With a large foundation fastener, many more.

2. No; I do not think it best to clip the wings of queen-bees. The practice has its advantages, but I find necessary disadvantages which will over-balance them.

3. No, it does not pay to spread the brood in the Spring, as has been proven by years of sad experience. Neither is it at all necessary, if the hive is rightly arranged.

4. I set my hives in rows, the second row breaking joints with the first, and so on through the apiary. The "scattered about" plan is not bad, and in some apiaries, favorably located for it, it would be all right. I do not lose queens, however, with the row plan as stated above, and yet I have all my hives as nearly alike as possible. There are many reasons why they should be, in color and otherwise.—James Heddon.]

"B" or No "B."

I really think my sister May
  Is stupider than me,
Because she said the other day
  There wasn't any "b"
In honeycomb, and spelt it just
  "C-double o-m-e!"
Of course she's wrong. I told her so;
  There's got to be a "bee"
Somewhere in honeycomb, because
  He makes it, don't you see!

—Wide Awake.

Topics of Interest.

Method of Hiving Swarms.

J. P. SMITH.

I have three distinct objects in view in hiving swarms: First, to prevent after-swarms; second, to prevent absconding; third, to obtain the largest amount of honey.

This method is not original with me. I am indebted to the good bee-books and bee-periodicals for my ideas. These ideas, obtained by careful reading, I have reduced to practice. In this article I will give my practice and just what my experience has been. I think my success shows the wisdom of my course.

As soon as the swarm clusters, I prepare the hive for them, locating it on the old stand, removing the parent colony to some other location.

I prepare the new hive by putting in two frames (with adhering bees) from the old hive, containing some uncapped brood and some honey, cutting out all queen-cells. I place these in the center of the hive, and fill the remainder of the hive with frames of empty comb, if I have them; if not, with frames filled with foundation.

If I think I have not robbed the parent colony enough, I shake bees from the frames of the old hive in front of the new one. I place the surplus chamber from the old hive—which, generally, at this time contains sections partly filled—on the new one. I find that by doing this the bees go right along with the work in the surplus chamber.

I next bring the swarm to the new hive, and let them run in at the entrance, which they will always readily do when the hive is prepared in this way. I bring the swarm on the bush or limb on which they alight, if they alight in a place where it is convenient to do so.

In case I find they are about to cluster in a place that will not be convenient to bring them from, I produce my swarming box, and catch them in that, and thus bring them to the prepared hive. The parent colony, served in this way, seldom casts a second swarm, and thus my first object is accomplished.

By hiving the swarm at a distance from where it alights, the returning "scouts" that have been in search of a "bee-tree," are prevented from finding the swarm, to escort it to the woods.

I have not had a swarm to abscond for several years, owing, as I think, to hiving them at a distance from where they alight, or to the presence of uncapped brood. Thus, my second object is accomplished.

In hiving in this way, it keeps the working force all together, and I think this accomplishes my third object, for I believe they will gather more honey than if in two forces. All I expect of the parent colony is to build up for Winter.

Just before swarming time, I put up about half a dozen spruce bushes in my apiary, placing them so loosely in the ground that they can easily be taken up. These bushes catch most of my swarms, thus rendering hiving very convenient.

I have no clipped wings, and no artificial swarms. My frames are all of the same size, so that they are interchangeable. If the weather is very warm, I shade the new hive. I never use any tin pans or force pumps.

Sunapee, N. H.

Early Pollen-Bearing Trees.

A. C. BUGBEE.

It is quite important that bee-keepers should have an abundance of early pollen-bearing trees in their immediate vicinity.

It is likely to be too cold or windy at the time early pollen-bearing trees bloom for the bees to fly to a distance, and if there is plenty of early pollen near, it will save many bees, besides encouraging them in brood-rearing.

The first pollen gathered in my locality comes from white maple, but I do not think them of much value, as they do not blossom until quite large, and some seasons so extremely early as to be of little use to the bees. In 1889 the white maples bloomed here in February, and not a pellet of pollen did the bees get from them, and if they had it would have been an injury to them.

The next tree to bloom is the box-elder, then the yellow and gray willow.

These I consider of great value to the bees, as they produce pollen and honey in abundance—the pollen mostly coming from the box-elder, and the honey from the willow, I think, though it is difficult to say particularly in regard to this, as their bloom overlaps, but comes in the order named.

I have had my bees fill their combs from this scource, and even begin to build new comb, showing that they were crowded for room.

We must not imagine this to be the only value for the trees, for we all want an abundance of trees about our places for various purposes. In all the vegetable kingdom there is nothing so grand, as a beautiful, symmetrical tree.

After the willow bloom comes the cherry, plum, crab-apple, and apple bloom, all overlapping each other, so that there is no interval until after apple bloom.

From this time until raspberry bloom there is an interval of two weeks, and if it will ever pay the bee-keeper to feed bees when they have an abundance in the hive, *this* is the time.

Now, I have written of my location, which is on the prairie in northwestern Indiana, about half way between Chicago and Indianapolis.

Lochiel, Ind.

Queen-Cell Protectors and Cages.

N. D. WEST.

I have used the queen-cell protectors and cages for about two seasons with success, and this Spring I have secured cells and put them in protectors and cases, and placed them back in the same hive to hatch. Yesterday I found 4 hatched out in cages, as happy as they could be in confinement. This was a colony that was superanuating their queen. When introducing queen-cells to a colony (and I do it at the same time that I take out the old queen), if for any cause I am doubtful about the cell hatching, I use two cells to be sure; put one cell in the protector, so that the queen can run out on the comb when she hatches, and one cell in the protector and cage combined, then when I look again, if both hatch, I save the one in the cage. If the one in the cage should hatch, and the other did not, let her out, as she is already introduced. I do my requeening in the swarming time, using the best cell from my best strain of bees.

Middleburgh, N. Y., May 21, 1891.

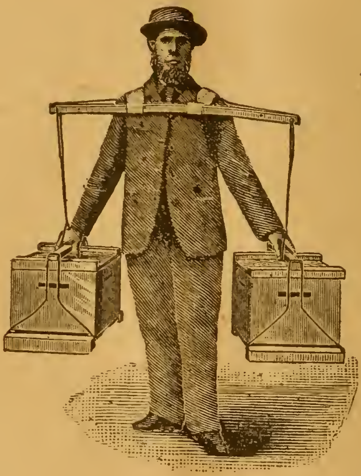
Neck-Yoke for Carrying Bee-Hives.

F. H. M'FARLAND.

Not having always found it an easy matter to procure good, efficient help to assist in carrying bees to and from the cellar, I began some time ago trying to invent a way by which I could do the work more speedily and easily.

Sometimes I would endeavor to do this work alone, carrying one hive at a time; but I found a hive of bees rather awkward to get hold of to carry any distance, and very tiresome when one has 100 or more colonies to place in winter quarters, as I have had.

At other times I would place 2 or 3 colonies on a board, and take them to the cellar or to the yard, with the aid of an assistant. I found these methods quite unsatisfactory, as well as the plan of taking two men to carry in one hive at a time, which was not expeditious enough, and too expensive.



NECK-YOKE HIVE-CARRIER.

I remember, when I used to work in the maple-sugar bush, we had sap-yokes to support and balance the pails on either side, and it occurred to me that this yoke might be adjusted for moving hives. After some little thought upon the subject, I studied out the arrangement here illustrated.

The yoke consists of two bent pieces of wood, fastened together in such a manner that, when adjusted, one piece is in front and one behind the carrier, and the weight comes squarely upon the shoulders by means of two wide pieces of webbing, making a very easy support.

The clamp attachment to the hive is of my own construction. I have loose bottom-boards, similar to the dovetailed hive, and this clamp springs on to the bottom-board at the front and rear ends of the hive. It is very quickly put in place and taken off.

I have used this yoke and clamp for some time past, and find it the most convenient contrivance for moving hives I have ever seen. By its use one man can do the work of two; do it easier, and with much less jar to the bees.—*Gleanings.*

Perforated Zinc Just Right in Size.

DR. G. L. TINKER.

I enclose herewith three samples of zinc, two of mine, and one that was taken from a swarm-hiver that was sent to me. I send the samples because there are three sizes of the perforations, though you will see little difference by the unaided eye.

The two-rowed piece with the corner clipped off, has the smallest perforation that can be used without the bees getting their heads fast in it. This is as I make the strips when the dies get a little dull. After sharpening, it makes perforations like the other sample, that is as large as it is safe to use as a queen-excluder.

The piece of square-end perforated zinc I put on trial before one of my hives, and in less than one-half a minute three bees were fast in it by the tops of their heads and tips of mandibles. I had tested it by my gauge, and knew they would be caught before I tried it.

I desire to call your attention to this matter, because I know that a reliable perforated zinc cannot be made for bee-keepers' use on a machine that makes many holes or perforations at one time.

I am sure that the accuracy required is so great that no one will be able to do it, so that a very cheap, reliable grade of perforated zinc cannot be made, and particularly for swarm-hivers and in queen-rearing, etc., where no queens must get through.

I regret that a grade of zinc is on the market with perforations too small, as many bee-keepers may be turned against the use of perforated zinc altogether.

I also enclose a sample of work on the new machine. It makes beautiful work in a whole sheet 24x42, all as perfect as can be.

New Philadelphia, O.

Texas Apicultural Notes.

A. C. ATEN.

We have had plenty of rain since my last, but most of the time the weather has been rather cool, especially at night.

On last Sunday there was a hail storm, with wind, and a deluge of water, over an area of country in this county (Travis), at least six miles long and three wide, which did a great deal of damage, destroying the cotton crop, and injuring all other crops.

One of my apiaries was near the center of the storm. I visited it to-day and found it all right, and the bees gathering honey. I presume the little fellows were frightened almost to death, for there must have been a fearful pattering on the hives.

Bees are doing pretty well here, and I think this is the beginning of as good a honey-flow as we have had for many years. They are gathering honey at present principally from horehound, wild marigold, and horsemint.

This is a great country for horehound, which is a splendid honey-plant, and appears to be on the increase; it has been in bloom over three weeks, and, owing to the seasonable weather, is still blooming. It does not produce bitter honey, but even if it did it is nearly all used up in brood-rearing.

The wild marigold, so-called, is really no marigold at all. It has corymbose heads, something like a sunflower; the rays are reddish-brown, tipped with yellow. The honey is amber colored, and most people like it very well.

Texas horsemint is very different from any horsemint I have ever noticed in the North, and is very plentiful some years, especially this year. It produces its flowers in auxiliary whorls, from 3 to 5, and sometimes more, on each branch, very much like horehound—at least the kind we have here. Horsemint honey is light and clear, with a little of the mint taste, and most people like it very much.

I had to feed my bees over 200 pounds of honey, but lost very few from starvation. I would have lost 20 or 30 colonies if I had not fed them. These colonies will probably gather over 2,000 pounds of honey, which will well repay the trouble and expense of feeding, as I always store the unsalable honey for that purpose.

A few words now in regard to foul-brood. While I have never seen any, and wish I never may, I most firmly believe that it never starts spontaneously. While we have very little chilled brood here, we do have some, and often brood dead from various causes.

There is probably no foul-brood within 200 miles of me, and this chilled or dead brood never generates foul-brood. Now, if foul-brood could be produced without contagion, there would certainly be a case once in a while. Mr. Robinson will never be able to prove the spontaneous production of foul-brood if he writes until doomsday.

I wish to say to friend R., that I have as good reasons for my belief, or better, than he has for his. His theory is unreasonable, contrary to all known laws, and about as rational as the belief of some people that the sun revolves around the earth. He might chill brood here by the ton, then let it rot and ferment, and he never would produce a case of foul-brood without introducing some of the foul-brood germs.

One point I wish to make is, that no one can be right certain that foul-brood started spontaneously in their apiary, especially when they live within 10 to 30 miles of where it is known to exist.

I have used G. M. Doolittle's queen-cell protectors (see page 569) for the last two years, and find them a great advantage.

Round Rock, Texas, May 20, 1891.

Successful Out-Door Wintering of Bees.

J. H. LARRABEE.

In any discussion of the subject of out-door wintering, Vermont should, I am sure, have a voice. All over the State, but more especially in the Champlain valley, bees are wintered out-of-doors. Whether those who inaugurated this system do so with a full knowledge of all the advantages to be obtained with light hives and cellar wintering, I know not, but the fact remains that scores of bee-keepers here practice this method with scarcely a desire for a change.

Our valley is favorably situated, the cold being tempered by warm breezes from the lower Hudson region; but an examination of the meteorological observations of the Signal Station at Burlington, would convince many that this effect is not too apparent.

But there are other reasons beyond the control of the average bee-keeper, why our bees winter so successfully.

The character of the honey used for winter stores is generally of the best, as so little Fall honey or honey-dew is obtained, that the major part of the winter stores, if of honey, must be of the white honey crop. This same lack of Autumn forage also renders late breeding light, and frees the combs of much surplus pollen. It is not a rare occurrence to find no brood of any kind in the hives by the first of October.

Winter flights are very desirable at a proper time, but may be injurious. A good flight during December is always beneficial, but one between Jan. 10 and Feb. 15 is often extremely injurious, as breeding is induced; and should no flights occur until April 1, as often happens, diarrhea may be the result.

If Spring protection is of sufficient importance to repay all the trouble of providing packing, then should we, who winter in chaff hives, congratulate ourselves upon having obtained this protection without the expenditure of one hour's extra labor.

The increased consumption of stores in out-door wintering is, I am quite sure, not as apparent at the opening of the clover bloom as on the first of April; as honey is, I contend, consumed in much larger quantities at this season, by colonies wintered in the open air.

One word more with regard to the method of packing in vogue here: The material may consist of almost any porous non-conductor of heat. Chaff and planer shavings having the advantages of lightness, are the general favorites. Care should, I think, be exercised that the packing be perfectly dry; that it may absorb as much of the moisture of the bees as possible; moisture being feared next to poor stores as a cause for Winter loss.

The packing is held in place by an outer case, consisting of two rims of about 10 inches in width each, with a good gable roof on top. These rims are about 2 inches larger, inside, than the brood-chamber, leaving that amount of space for the packing.

After the close of the honey season, the bees are left as much as possible to themselves, the only care being that they have sufficient stores for the Winter, until about Nov. 1, Fall "tinkering" and excitement being avoided as detrimental. At this time the brood-chamber cover is removed, and a piece of burlap or cotton placed upon the frames, and the top filled with packing to the depth of about 6 inches. Formerly the super packing was used loose, but now sacks, or trays with cloth bottoms, are used to hold the chaff or shavings. These sacks are very handy in Spring, when, upon some warm day, it is desired to examine many colonies.

The packing is not removed until settled warm weather, and then only from the top; the sides remaining packed throughout the year. This packing at the sides I consider an advantage, even during the sultry days of basswood bloom.

In answer to the argument of cumbersomeness, I will simply say that nearly all of the improved methods of management at all seasons of the year may be practiced with chaff hives without the moving of a single one. How this may be done could form the subject of many long articles.

Last Winter I wintered 96 colonies out-of-doors in chaff. On April 1, all were alive; one was queenless, and one dwindled during April, as a result of late "tinkering."—*Bee-Keepers' Review.*

Black, Shiny Bees.

B. W. PECK.

Bees in this vicinity are doing quite well, but the weather is very cold. On May 16 ice formed half an inch thick, but still there is considerable fruit unhurt. My loss was 3 colonies out of 61; two colonies starved and the other one was queenless. On pages 677 and 678 of the BEE JOURNAL, I notice questions by J. T. Wilson and William Craig, about black, shiny bees, and like Mr. Craig, I think it is a disease. About two years ago some colonies in my apiary, that I knew had lots of old bees, had no black, shiny ones among them, while other colonies had from a few to a good many. This Spring I have 8 or 10 colonies affected, out of 58, and 2 colonies that wintered well are almost ruined with it. These colonies have plenty of brood, yet they die off faster than the young ones hatch, although the young are hatching quite fast, and the bees are piled up in front of the hives by the hundred. I examined them yesterday, and if I could see straight there were young bees affected in the same way. I examined them with a microscope, and they are hairless, or nearly so. As I have had 11 years' experience with bees, and have studied their nature quite thoroughly, I have been considerably worried about the disease (if such it is), and would like to hear from others on this subject. We are having a splendid rain to-day.

Richmond Centre, O., May 21, 1891.

Size of Passage-Ways the Bees Require.

JAMES HEDDON.

I consider it a matter of great importance to bee-keepers to have a correct idea of what mechanical appliances do, and what do not, facilitate and encourage bees to enter and rapidly carry on work in the surplus apartment.

When first adopting queen-excluding metal between the brood and surplus apartments, mainly for the purpose of knowing where the queen was at all times, especially when removing surplus cases of comb-honey, I will admit that I felt a little nervous as to the matter of whether the workers would be able to squeeze through these passage-ways with their loads of honey, so readily as not to lessen the amount of surplus honey which might be stored.

D. A. Jones, of Canada, rightfully has the credit of the great benefit which has been derived from the use of the queen-excluding metal. To satisfy myself, I began making experiments with about 40 colonies with the queen-excluders, and the same number, as nearly equal as could be chosen, without. Three times, in three different years, did I repeat the experiment, each time with a larger number of colonies, and satisfied myself that there is no hindrance whatever, as I am pleased to see is the prevailing opinion of those who answered Query 767.

The object of this article is to do away with the expensive, troublesome, and erroneous idea of Dr. Tinker. I have experimented a great deal in regard not only to the kind, but the amount of passage-way needed by the bees to do their best, and I tell you here that two rows of queen-excluding holes, the full length of the Langstroth hive, will fully accommodate the largest colony of bees that ever resulted from one queen (and that, too, in the busiest season of the year) between the brood and surplus apartments, while there are eight such rows in the break-joint bee-space board.

If one-half of them, or more, were filled with comb or glue, as they sometimes are when not properly adjusted, there is more passage-way than any colony can use, and that fact is probably one reason why the bees are not slow to plug up many of the holes, when everything is favorable for so doing.

Now, there is a serious objection to using two rows of holes. There has, of late, been discussion enough to convince the greatest novice in apiculture, that to avoid brace-combs and glue, the bee-spaces must be exactly the right measurement.

Now, then, if the measurement is right between the upper and lower surfaces of the slats, and the brood-frames below and the surplus sections above, that space will be too large between the brood-frames and sections and the surface of the zinc, because the zinc is so very much thinner than the slats.

Owing to this well-known law, the closer the slats come together (that is, the narrower the space between the edges of the slats), by all odds, the less will be the likelihood of brace-combs being built to either side of the honey-board.

There must be some play, or allowance, in the practical construction of honey-boards, and before I would put the slats far enough apart to take in a zinc strip with two parallel rows of holes, I would, by all means, make the honey-board entirely of metal, such as I described in *Gleanings* something over two years ago.

In that honey-board either one or two rows of holes can be used over each top-bar, and the break-joint and bee-space principles both be preserved. The bee-space can be made by turning up the edges of the zinc, or by tacking on a wood border, as I made them in the first place, when Mr. Jones first announced the queen-excluding idea.

Dowagiac, Mich.

Prevention of After-Swarming.

M. H. DE WITT.

I will give your readers my plan to prevent or control after-swarming. I have found it the easiest thing in the world.

My practice is to destroy all the queen-cells at any time within three of four days after the swarm issues. When the cells are worth preserving, they may be transferred to nucleus colonies, and the queens reared. A young queen is introduced to the colony, and there is no more swarming from that hive that season.

Perhaps I should have said that when further increase is not desirable, or we have no use for the swarm, the bees may be put back into the hive they issue from, while the queen remains in the trap.

If a strange queen is introduced, it may be done by the cage system, or by fumigating with tobacco smoke. If by the former method, the cage may be placed upon the frames, or, which is still better, inserted at the bottom corner of one of the brood-frames.

Cutting out the queen-cells, and then placing the brood and other combs over the new colony, with a queen-excluder between the two hives is good, but not new. Dr. Tinker, I think, was the first bee-keeper to adopt that method.

Of course, if this plan is adopted by any one, I see no way so good to manage to obtain surplus honey as by using the extractor. I would suggest that before the transfer of the brood to the new colony, as much as possible of the honey in the brood-combs should be extracted. The whirling of the combs in the extractor would be likely to destroy any queen-cells that escaped the eye when the combs were examined.

There is another suggestion I will make here. It is this: Do not wait five days before making the transfer of brood-combs from the old hive to the new one. Do it late in the afternoon of the day the swarm issued.

The young bees will go down into the bottom hive after awhile. In two weeks from the day they leave the combs, the young bees will be in the fields gathering pollen and honey.

Sunny Side, Md.

Notes from Missouri.

BYRON HAMS.

The cyclone of the 20th inst., passed only two miles south of this place, leaving death and destruction in its path. Houses, barns, and other out-buildings were destroyed, fences and trees torn up, and fields laid waste. Three persons were instantly killed, five mortally wounded, and more than a score of people seriously hurt.

The track of the cyclone was only about 100 yards wide, but the scene presented after the passage of the storm beggars description. The cyclone was accompanied by hail, and some of the stones were as large as goose eggs.

Bees are beginning to swarm here, and yesterday they began working on white clover, but I do not expect a great deal of surplus honey from it this season.

I moved 30 colonies of my bees 6 miles north of here, last week. The day before moving them, I removed the upper story, spread a sheet of cheese cloth over the frames, and fastened it with narrow strips around the top edge of the hive.

I then tacked each lower corner of the hive to the bottom-board with a 6-penny wire nail.

The next morning, before the bees got out, I tacked a strip of lath over the entrance, and loaded them into a common farm wagon, with about 6 inches of hay in the bottom of the box.

In order to ascertain if it made any difference which way the hives set in the wagon, I placed those on one side crosswise, and those on the other side lengthwise of the wagon-box.

The hives were 10-frame Langstroth, and at the end of the journey I could see no difference in favor of either way of loading. The road was quite smooth, and I found very few dead bees, and scarcely a frame moved out of place.

If Mr. Roese will try the Muth plan of out-door packing for Winter, he will exclaim, "Eureka!"

I prefer old rags to anything I have tried for packing over the boards. The hives should be tipped well forward to allow the condensed moisture on the boards, to run down and out at the front of the hive.

Although our prospects for clover honey are very slim, I am glad to see so many encouraging reports from other localities.

Worcester, Mo., May 25, 1891.

Best Location for an Apiary.

THOS. CRISMAN.

I should say, first, proximity to alfalfa and clover fields; second, shade; third, water.

I think I can demonstrate the first two propositions by my own experience. In 1885 I moved my bees to where they are now located. There was then about ten acres of alfalfa within a mile of the apiary. Thirty-six colonies averaged 19 pounds per colony surplus. In 1886, with 25 acres of clover and alfalfa within range, 44 colonies averaged 21 pounds surplus. In 1887, with a range of probably 50 acres, the average was 28 pounds per colony. In 1888 the acreage had doubled again, and my average increased to 32 pounds. In 1889 there was not less than 300 acres of alfalfa within 2 miles of my bees, and my average was 67 pounds of comb-honey per colony, with 50 colonies, Spring count.

In 1890 I started with 56 colonies in the Spring, but owing to the lack of water to irrigate, and the small amount of alfalfa saved for seed, in connection with the dry weather in August and September, my average was about 52 pounds surplus. But as long as the seasons were favorable, the average increased about in proportion to the increase in acreage of alfalfa and clover in range of the bees.

Now, in regard to shade: My neighbor Moon, who lives about two miles from me, and has the same amount of bee-pasturage that I have, and manages his bees about the same, has them located in a dense thicket of cherry trees, where the sun and wind never reaches them in Summer. For the last five years his average has been just about 10 pounds per colony more, each year, than mine has.

My apiary is located in open ground, without any protection except a three-wire fence on three sides, and an open board fence on the other; and the only reason that I can see for the difference in the amount of surplus honey produced is the shade and protection from the wind. We each have a lake near the apiary, and the facilities for getting water are just the same in the two apiaries. If not in shade, what is it?—*Read before the late Colorado State Convention.*

Hiving a Swarm of Bees.

MRS. L. HARRISON.

A farmer bought a patent hive, and a neighbor, who had kept bees all his life, coming in, asked him how he was to get the bees in. The old bee-keeper, who had always kept bees in the old gum or box-hive, and when they swarmed cut off the limb and set the hive over it, said, "You will have to cut a hole in the bottom to put them in." There was plenty of room at the fly entrance to run them in, but he had never seen it done, and could not think of any way but cutting a hole. My bees cluster on fruit trees, and I do not want to cut off the limbs, so I shake them into a dish pan, cover them with an apron, and pour them down in front of the hive. When bees are clustered high, I have a wire basket attached to a long, light pole, which I push up under the cluster, and jar them into it. If I get the queen the first jar, as I sometimes do, as she is usually on the outside of the cluster, the rest will soon follow.—*From the Prairie Farmer of last week.*

CONVENTION DIRECTORY.

Time and place of meeting.

1891.
Aug. 6.—Rock River, at Sterling, Ills.
J. M. Burtch, Sec., Morrison, Ills.

Sept. 3.—Susquehanna County, at So. Montrose, Pa.
H. M. Seeley, Sec., Harford, Pa.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

North American Bee-Keepers' Association

PRESIDENT P. H. Elwood....Starkville, N. Y.
SECRETARY- C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

PRESIDENT—James Heddon ..Dowagiac, Mich.
SEC'Y AND MANAGER—T. G. Newman, Chicago.

Bee and Honey Gossip.

☞ Do not write anything for publication on the same sheet of paper with business matters, unless it can be torn apart without interfering with either part of the letter.

Packing is Good.

Your Comb-Foundation and Family Scales are at hand, and I find all in very good condition. I think the Scales are excellent, and would not take the money back that I gave for them. I think your process of packing foundation is good.

E. F. CLAPP.

Dolson, Ills., May 6, 1891.

White Clover Bloom.

Honey locust and white clover are in bloom; the bees are booming, and prospects are good for a large crop of honey. My first swarm issued on May 21.

Carpenter, Ills. ED. E. SMITH.

Young Queens Laying.

The long-continued dry weather has at last ended with a fine rain lasting 48 hours, during which time 4½ inches of rain fell, making a good honey crop from white clover almost a certainty, as the clover is just beginning to bloom. On April 18, I finished taking my bees out of Winter quarters, and there has not been a day since that time on which they could not work. This is the best Spring for bees that I ever saw, but mine are not ready for the harvest yet, as they were all weak on account of the poor season last year. I have 195 colonies left, in fair condition; they are building up very fast, and I think they will do well. I have two young queens that have been laying since the middle of the month. Who in Iowa can beat that?

N. STAININGER.

Tipton, Iowa, May 22, 1891.

Entirely Satisfied.

The goods reached me in five days from the time of sending my order. Thanks for your usual promptness. I wish to express my entire satisfaction with all my dealings with you. The Excelsior extractor is "a dandy;" but I ordered a 2-frame, and received a 3-frame extractor for the same price.

G. O. MILLER.

Epworth, Iowa, May 25, 1891.

Honey from Fruit Bloom.

Bees have wintered well, and are doing finely. I have removed two supers full of honey gathered from fruit bloom, and the bees are working in several more. I only wintered 7 colonies, having united the weak colonies last Fall. So far I have had 2 swarms cast. I never saw a better prospect for a honey season. Last Sunday morning I noticed honey-dew on my rose bushes, and upon examination found that oak trees had a very heavy covering of it; but, strange to say, I could not find a single bee working on it. I have, in the last two years, tried several different hives, and have settled down to the use of the 8-frame dovetailed Langstroth hive, and never expect to use any other. The super has every advantage, and it is no trouble to remove the sections. There are 10 pounds of honey in the super by the time a 10-frame hive is filled below.

IRA REEVES.

Carmi, Ills., May 24, 1891.

Bees Turned Black.

Dr. Miller wishes to know if his yellow bees turned black, or were the few blacks in his neighborhood of so powerful a character as to overcome them? I do not know about the over-coming, but I do know that bees will mix. I never knew any one to keep their bees from mixing for any length of time—either blacks or Italians—but the matter is not worth worrying over very much, because blacks are as good as Italians, and *vice versa*. I do not know of any bee-periodical that can be considered as my pet, and I believe in the theory of "the survival of the fittest," and the AMERICAN BEE JOURNAL is able to be out and visits me every week. A periodical that only comes *once* in *two* weeks is not to my liking, and when it does not reach me oftener than *once a month*, that is still worse. JOHN F. GATES.

Ovid, Pa.

Full to Overflowing.

My bees are doing well, having wintered on the summer stands. My loss was 2 colonies out of 63, and so far 3 swarms have been cast. White clover is beginning to bloom, and so are raspberries and blackberries. The hives are full to overflowing with bees, and I expect a big honey crop this year.

S. BURTON.

Eureka, Ills., May 22, 1891.

Adulterated Honey—A Correction.

In the AMERICAN BEE JOURNAL of May 14, page 642, near the bottom of second column, you make me say that I found several wholesalers and retailers of such goods, where my manuscript said several *hundred* retailers. As it makes a large difference in the seriousness of the charge, I ask for correction.

Capac, Mich. BYRON WALKER.

Only a Beginner.

I am only a novice in bee-culture, with 12 colonies of bees. Did not lose a colony the past Winter, and my bees are booming, with plenty of honey, bees and brood. JACOB MOORE.

Ionia, Mich.

Sweet Clover Honey.

Last season my crop of comb-honey was only 400 pounds from 50 colonies of bees, but my bees wintered well, on the summer stands, except 10 colonies which were put into the cellar. I left one small colony, with only about a quart of bees, on the summer stands, with about 10 pounds of stores, as an experiment. I gave them no protection —not even a blanket. They were in a 10-frame Langstroth hive, and, to my surprise, they came through the Winter all right, and are now busy carrying in pollen. My cellar is damp, but the combs are not moldy. The hives are set on planks, about 3 feet from the ground. I lost only 5 colonies out of 40, which, I think, is doing well for a beginner. I work only for comb-honey, and can sell it at from 20 to 25 cents per pound. I expect a good crop this season, as there are plenty of soft maples and white and sweet clover. The best honey I have had was from sweet clover. Last year was a stunner, but I am not discouraged.

GEO. W. STILES.

Harvey, Ills., April 17, 1891.

Bees were Allowed to Starve.

My bees wintered pretty well, and I only lost 5 colonies out of 62, but I had to feed them last Fall. A great many bees in this county starved because they were not fed last Fall, or early this Spring. Prospects are good for white clover, which is commencing to bloom. There is but little at present for bees to work on, as the fruit-bloom is about gone. This section was visited by a fine rain the day before yesterday, which was badly needed, and it is cloudy and quite cool to-day. W. H. TUTTLE.

Creston, Iowa, May 23, 1891.

Connecticut Association.

The Connecticut Bee-Keepers' Association was formed on May 13, at Mr. Edwin E. Smith's, in Watertown, Conn., and the following officers elected: President, Edward S. Andrus, Torrington; First Vice-President, Barber F. Stratton, Hazardville; Second Vice-President, Edwin E. Smith, Watertown; Secretary, Mrs. W. E. Riley, Waterbury; Treasurer, Porter L. Wood, Waterbury. The next meeting will be held in Hartford, Conn., some time in the Fall, and it is hoped there will be a good attendance. A MEMBER.

Our Book—Bees and Honey.

A new (the eighth) edition of the well-known work, "Bees and Honey, or the Management of an Apiary for Pleasure and Profit," thoroughly revised and largely re-written, is sent to us by Mr. Thomas G. Newman, author and publisher, 246 East Madison Street, Chicago. It is a duodecimo volume of 250 pages, adorned with a great number of illustrations (including portraits of all the chief students of the bee, living and dead), and neatly bound in cloth. The price is $1.—*Country Gentleman.*

Wavelets of News.

Pollen for Spring Use.

The brood-combs in reserve that have the most pollen in them should be the ones first given to the colonies in the Spring. These are the ones among which the moths work first, and make the most havoc, and the pollen they contain is just what the bees need when new pollen is not plenty, or they are prevented from collecting it by long continued storms.—*Farm and Home.*

◆

Spring Dwindling.

This has been one of the most disastrous years ever passed through in this vicinity. Many small bee-keepers (having 5 to 15 colonies) have lost all, and of my home lot, the loss will amount to at least 40 per cent., although but few died in the cellar; but in all my experience I never saw so bad a case of Spring dwindling. What were fairly good colonies when set out, are now no more, and queens, too, disappear every time I look them over.

I have an interest in another lot of bees ten miles from here, which came out in good condition; and what I never had occur before, stored quite a quantity of honey from hard-maple bloom; in fact, counting the strength of the colonies, and the shortness of the days, I think they stored it as fast as during basswood time. But when will we again get weather just right, at just the right time?

Bees are now revelling in fruit-bloom, and I hope it will put a stop to dwindling.—C. A. HATCH, in the *Wisconsin Farmer.*

◆

Is Colorado a Honey Country?

To this question I will emphatically answer yes.

Take the country between the South Platte River and the highest foot-hills from Denver and Golden to north of Ft. Collins, you will find it one of the best settled and cultivated and productive regions of the State. See the thousands of happy homes, surrounded by all sorts of grain, fruits and flowers, both wild and cultivated. Why should not this be the happy honey-ground for the beautiful golden-banded bees, in this American Italian climate? A strong proof of profit and success, is the number of persons engaged in the business, and the numerous carloads of hive stuff and bee-fixtures sold here. Also the tons of first-class honey shipped out.

In the little town of Longmont there are about 500 colonies of bees, and within a radius of ten miles 3,000. From what I can learn Loveland and Ft. Collins are coming to the front with their proportion. Though this was not a full honey year, and many colonies stored but little surplus, yet some apiaries averaged 70 pounds to the hive, Spring count. A great loss was in the bee-keeper's own neglect or mismanagement.

The foot-hills, canyons and little streams coming out of the mountains, furnish a field for the working bees. Mrs. Taylor, of Winona, near the Big Thompson canyon, says the wild fruits and flowers alone furnish a splendid bee-pasturage.—D. R. EMERY, in *Colorado Farmer.*

◆

Remedy for Black Ants.

My hives were covered with ants, but now I do not see them at all. The bottoms of my chaff hives are painted with coal tar. It costs 10 cents a gallon. One quart warmed and spread on quite thickly, with a brush-broom, will paint the bottoms of ten hives. The mice do not trouble them either. It is cheaper than tarred paper; it also preserves the wood.—R. A. TOBEY, in *Buckeye Farmer.*

◆

Warm Water for Bees.

I have just been out to empty the bees' watering trough—it froze hard last night; and if left for the sun to thaw out, the result would be many chilled and drowned bees. In a few moments, just before the bees come out, I shall fill the trough with quite hot water. It is very shallow, and will need re-filling every hour with the warm water. It is placed a few yards from the hives, and just south of the eight-foot, tight-board fence, north of the apiary. Bees would otherwise go half a mile north, in the chilling wind, for *cold* water instead of warm, and many would be chilled and lost.

It was indeed a beautiful sight yesterday, such a swarming over the water! The day before had been too cold for flight; thus they came in double numbers.

I sat down in the midst of them, and they swarmed all over me, warming themselves in the bright morning sunshine, with a murmuring like the sound of many waters. And I sat and dreamed of the unfathomed and unfathomable mystery of LIFE, and—of the pennies my bees will have brought me next Fall! —Dreamer, in *Wisconsin Farmer*, May 20, 1891.

◆

Red Clover and Honey Bees.

Red clover abounds in nectar, but when it grows on very rich soil the petals of the heads are so long that honey bees cannot reach it, and the fertilizing has to be performed by bumblebees. But on poor soil during a drouth, the head are small, and bees can reach the nectar, or when it is so abundant that it wells up in the tubes, they can reach it. Bee-keepers living on a peninsula in northern Michigan, report that red clover is their main dependence for honey, and the clover heads there are always very small.—*Prairie Farmer.*

◆

Preconceived Notions.

What a lot of trouble this commodity in human nature makes us sometimes! We figure out in advance whether a thing will or will not work. We are morally certain that we are not deceived, and we try hard to make all our experiments come out so as to favor our views. With enough bias of opinion, we can make out a pretty straight story for or against the idea; but when such are reported, it costs the fraternity much. Let us be unbiased, and ready to discard our old notions when facts and experience warrant it.—*Gleanings.*

◆

Combs Containing Dead Bees.

Where the bees are dead in a hive, take out the combs and look them over carefully; cut off queen-cells, as they will never be used again, and only add to the weight of the comb. If there is thick comb, with cells on only one side, cut it off; also drone-comb.

Scrape out the hive and put the scrapings, queen-cells, drone-comb, etc., together to be melted up for wax. This refuse does not look fit for anything; but it is. If handled rightly, the product will be beautiful wax.

I always scrub out such hives with a brush and hot suds, and scald them with boiling water before I return the combs, especially if the bees died of diarrhea. A swarm then run into the hive will find it clean and furnished, and will not desert it.—Mrs. L. Harrison, in the *Prairie Farmer.*

Bee-Culture a National Industry.

Among the recent industries of rapid growth in this country, bee-culture stands pre-eminent. Of course, as a homely art, bee-keeping is no modern industry, being as old as history; but in its scientific developments, it is of recent growth.

In these times, when science is properly taking its place at the helm in all departments of human industry and activity, it is not strange that it is promptly assuming the guidance of bee-culture.

This is a utilitarian, as well as a scientific age; and this is why bee-culture is being so rapidly developed, for its extraordinary growth is only in the ratio of its utility.

Though known to commerce for 2,500 years, hitherto it has been followed and known, in this country at least, principally as a local industry. But bee-culture, from the soundest economic considerations, ought undoubtedly to become a great national industry, fostered and protected by the State.—*Exchange.*

◆

Races of Bees.

Dalmatian bees are easy to manage, and excel in comb-honey.

The Hymettus bees of Attica are much like Carniolans except in disposition.

Palestine bees come from the Holy Land, and are often confused with Syrians, to which they are inferior. They use more propolis than any other variety, and are more troubled with laying workers, but are even more beautiful than Cyprians.

Egyptian bees, found in Egypt, Arabia and Asia Minor, have yellow bands, and are smaller than Italians. Although they have long been domesticated in Egypt, where floating apiaries were common, they have been found vicious by European bee-keepers who introduced them. Their cells are smaller than those of other species. Some naturalists believe yellow bees originated from them instead of from Syrians.—*Indiana Farmer.*

◆

Separators and Comb-Honey.

For profit alone use no separators; if straighter combs are desired, use the T super with separators; if the eye and the taste are to be gratified at the expense of financial profit, use single wide frames with separators.—R. L. Taylor, in the *Review.*

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

ADVERTISING RATES.

20 cents per line of Space, each insertion.

No Advertisement inserted for less than $1.00.

A line of this type will admit about eight words. ONE INCH will contain TWELVE lines.

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Advertisements intended for next week must reach this office by Saturday of this week.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

☞ Subscribers who do not receive their papers promptly, should notify us at once.

☞ Send us *one new* subscription, with $1.00, and we will present you with a nice Pocket Dictionary.

☞ The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to pay for another year.

☞ Systematic work in the Apiary will pay. Use the Apiary Register. It costs:

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 25
" 200 colonies (420 pages)	1 50

☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

CLUBBING LIST.

We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

	Price of both.	*Club.*
The American Bee Journal	$1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Guide	1 50	1 40
Bee-Keepers' Review	2 00	1 75
The Apiculturist	1 75	1 65
Canadian Bee Journal	1 75	1 65
American Bee-Keeper	1 50	1 40
The 7 above-named papers	6 00	5 00
and Langstroth Revised (Dadant)	3 00	2 75
Cook's Manual (1887 edition)	2 25	2 00
Quinby's New Bee-Keeping	2 50	2 25
Doolittle on Queen-Rearing	2 00	1 75
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 60	1 50
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	2 20
Western World Guide	1 50	1 30
Heddon's book, "Success,"	1 50	1 40
A Year Among the Bees	1 50	1 35
Convention Hand-Book	1 50	1 30
Weekly Inter-Ocean	2 00	1 75
Toronto Globe (weekly)	2 00	1 70
History of National Society	1 50	1 25
American Poultry Journal	2 25	1 50
The Lever (Temperance)	2 00	1 75
Orange Judd Farmer	2 00	1 75
Farm, Field and Stockman	2 00	1 75
Prairie Farmer	2 00	1 75
Illustrated Home Journal	1 50	1 35
American Garden	2 50	2 00
Rural New Yorker	2 50	2 00
Nebraska Bee-Keeper	1 50	1 35

Do not send to us for sample copies of any other papers. Send for such to the publishers of the papers you want.

◆

If you have a desire to know how to have Queens fertilized in upper stories, while the old Queen is still laying below—how you may *safely introduce* any Queen, at any time of the year when bees can fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact, everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and is as interesting as a story. Price, $1.00. For sale at this office.

◆

Supply Dealers should write to us for wholesale terms and cut for Hastings' Perfection Feeders.

The Convention Hand-Book is very convenient at Bee-Conventions. It contains a simple Manual of Parliamentary Law and Rules of Order for Local Bee-Conventions; Constitution and By-Laws for a Local Society; Programme for a Convention, with Subjects for Discussion. In addition to this, there are about 50 blank pages, to make notes upon, or to write out questions, as they may come to mind. They are nicely bound in cloth, and are of the right size for the pocket. We will present a copy for one new subscription to the BEE JOURNAL (with $1.00 to pay for the same), or 2 subscribers to the HOME JOURNAL may be sent instead of one for the BEE JOURNAL.

When talking about Bees to your friend or neighbor, you will oblige us by commending the BEE JOURNAL to him, and taking his subscription to send with your renewal. For this work we will present you with a copy of the Convention Hand-Book, by mail, postpaid. It sells at 50 cents.

Calvert's No. 1 Phenol, mentioned in Cheshire's Pamphlet on pages 16 and 17, as a cure for foul-brood, can be procured at this office at 25 cents per ounce, by express.

Binders made especially for the BEE JOURNAL for 1891 are now ready for delivery, at 50 cents each, including postage. Be sure to use a Binder to keep your numbers of 1890 for reference. Binders for 1890 only cost 60 cents, and it will pay you to use them, if you do not get the volumes otherwise bound.

Red Labels are quite attractive for Pails which hold from 1 to 10 lbs. of honey. Price, $1.00 per hundred, with name and address printed. Sample free.

A Nice Pocket Dictionary will be given as a premium for only **one new** subscriber to this JOURNAL, with $1.00. It is a splendid little Dictionary—just right for the pocket. Price, **25 cents.**

Please send us the names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you.

Very Well Pleased. — The Sewing Machine and Scales are received in good order, and I am well pleased with them. They do good work. The sewing machine is ornamental as well as useful. The scales are very handy for family use.—G. RUFF, Burlington, Iowa.

We Club the American Bee Journal and the Illustrated Home Journal, one year for $1.35. Both of these and Gleanings in Bee Culture, for one year, for $2.15.

☞ The Union or Family Scale has been received, and I am much pleased with it. W. H. KIMBALL.
Davenport, Iowa.

The Bee-Keepers' Directory, by Henry Alley, Wenham, Mass. It contains his method for rearing queens in full colonies, while a fertile queen has possession of the combs. Price by mail, 50 cents.

We send both the Home Journal and Bee Journal for one year, for $1.35.

Bee-Keeping for Profit, by Dr. G. L. Tinker, is a new 50-page pamphlet, which details fully the author's new system of bee-management in producing comb and extracted-honey, and the construction of the hive best adapted to it—his "Nonpareil." The book can be had at this office for 25c.

Clubs of 5 New Subscriptions for $4.00, to any addresses. Ten for $7.50.

Convention Notices.

☞ The Rock River Bee-Keepers' Association will meet at Sterling, Ills., on Thursday, Aug. 6, 1891.
J. M. BURTCH, Sec., Morrison, Ills.

☞ The ninth annual meeting of the Susquehanna County, Bee-Keepers' Association will be held on Thursday, Sept. 3, at South Montrose, Pa.
H. M. SEELEY, Sec., Harford, Pa.

HONEY AND BEESWAX MARKET.

NEW YORK, May 29.—New crop of Southern honey is now arriving freely. We quote: Extracted, 75@80c; orange blossom, 7@7½c; California, 7@7½c. Beeswax scarce at 28@30c.
HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

KANSAS CITY, May 30.—Choice 1-lb. comb all sold; plenty of 2-lb. and extracted on the market. We quote: Comb, 2-lb., 10c. Extracted, 6@6½c. No beeswax in the market.
CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CINCINNATI, May 30.—There is fairly good demand for both comb and extracted-honey, with good supply. Comb-honey, 14@16c for choice, in a jobbing way; extracted, 6@8c.

Beeswax is in good demand at 25@30c for good to choice yellow. C. F. MUTH & SON,
Corner Freeman & Central Aves.

CHICAGO, May 30.—Demand for both comb and extracted honey increasing, and our stock is light. Can use shipments to advantage. 1-lb. sections, 16@18c; 2-lbs., 14@15c; extracted, 7@8c. Beeswax, 30c.
S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, May 30.—The demand for honey is very light; supply fair, at 12@14c; extracted, 5@7c. All good comb-honey sold out; new crop will be in within 30 days; prospects good. The demand for beeswax is good, at 25@27c; supply light.
HAMBLIN & BEARSS, 514 Walnut St.

CHICAGO, May 30.—Very little comb-honey being sold; prices are about the same, with really very little fancy goods offered. Best white comb, 17@18c; extracted, steady, is in good condition, at 7@8c. Beeswax, 28c.
R. A. BURNETT, 161 S. Water St.

BOSTON, May 29.—No change in prices of honey; sales a little slow, on account of extremely low price of maple sugar. White, 1-lb. comb, 18@19c; fair to good, 14@18c; 2-lb. sections, 16@17c. Extracted, selling at 7½@8½c. No beeswax on hand.
BLAKE & RIPLEY, 57 Chatham St.

ALBANY, N.Y., May 29.—The honey market is slow, with small stocks of comb. We quote: clover, 1-lb. comb, at 15@16c; buckwheat, 12@13c. Extracted, light, slow at 7@8c; dark, firm at 6@7c. Beeswax, 25@27c.
H. R. WRIGHT, 326-328 Broadway.

NEW YORK, May 29.—No comb-honey in market. Extracted—demand light, except for Southern, which would sell easily at 75@80c per gallon for common, and 7½@8c for Florida. Beeswax scarce and firm at 29c.
F. G. STROHMEYER & CO., 122 Water St.

MILWAUKEE, May 30.—Supply of choice comb-honey is very small, and shipments will find a good market. We quote: Choice, 1-lb. sections, 18@19c; second best, 16@17c; common, 13@15c; dark, 10@12c. Extracted, white, in barrels and kegs, 8@8½c; dark or amber, 6@7½c. Beeswax, 28@30c.
A. V. BISHOP, 142 W. Water St.

CHICAGO, May 30.—Fancy white comb-honey, 1-lb., 17@18c; fair to good, 15@17c; ordinary grades, 1@2c less. Extracted—white clover or basswood, in kegs or small barrels, 8@9c; California. 60-lb. cans, 7@8c. Beeswax scarce and in demand at 30@31c for prime yellow. J. A. LAMON, 44-46 S. Water St.

DETROIT, May 30.—No comb-honey in the market. Extracted, 8@9c. Beeswax firm, at 29@30c. M. H. HUNT, Bell Branch, Mich.

SAN FRANCISCO, May 27.—Extracted honey is not plentiful. We quote: 5½@6¼c, the latter for water-white. No comb-honey in market. Beeswax scarce, at 26@27c.
SCHACHT, LEMCKE & STEINER,
16-18 Drum St.

Lots of Replies.

During the year 1888, we had an advertisement running in the American Bee Journal, and we had the same in several Daily and Weekly papers, but to our surprise we received more than double the number of responses from the advertisement in the American Bee Journal, than from all our others combined.

The fact that we are still receiving letters referring to our advertisement in the Bee Journal, shows that it is preserved and read long after it is received. Newspapers are read and thrown aside and that ends it, but the Bee Journal is preserved, and the advertisements are often noticed and bring responses long after they appeared in it.

We regard the American Bee Journal as a first-class advertising medium.

Cedar Rapids High-Speed Engine Co.,
HENRY RICKEL, *President.*

Wants or Exchanges.

Under this heading, Notices of 5 lines, or less, will be inserted at **10 cents per line,** for each insertion, when specially ordered into this Department. If over 5 lines, the additional lines will cost 20 cents each.

WANTED—Italian Queens or offers for pure Plymouth Rock Eggs or Quinby Hive-Corner Clasps. L. C. AXTELL, Roseville, Ills.
22A2t

WANTED—To exchange for about 25 lbs. of Bees, tested Queens, either 3-band or 5-band Italians, to be sent in June. Will give one tested Queen for every pound of bees, any race, sent me, charges paid. If you can spare them and desire a Queen, send bees at once and drop me a card. JACOB T. TIMPE, Express and P.O. address, Grand Ledge, Mich.
19Atf

Advertisements.

AGENTS WANTED in every Town and County in America, to solicit subscriptions for the **ILLUSTRATED HOME JOURNAL.** Will allow a Cash Commission on all Subscriptions obtained. This is a fine opportunity for active young people to easily earn several dollars a day. Particulars as to commission, etc., and sample copies of the paper, will be sent to any address.

THOS. G. NEWMAN & SON,
246 East Madison Street, - - CHICAGO, ILL.

Eighth ✦ Edition ✦ Just ✦ Published

New and Revised Edition

—OF—

BEES AND HONEY,

OR THE

Management of the Apiary

FOR PLEASURE AND PROFIT

—BY—

THOMAS G. NEWMAN,

Editor of the American Bee Journal.

This edition has been largely re-written, thoroughly revised, and is "fully up with the times" in all the improvements and inventions in this rapidly-developing pursuit, and presents the apiarist with everything that can aid in the successful management of an apiary, and at the same time produce the most honey in an attractive condition. It contains **250** pages and **245** illustrations—is beautifully printed in the highest style of the art, and bound in cloth, gold lettered. Price, **$1.00**—postpaid.

Liberal Discount to dealers, by the dozen or hundred.

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☞ This new edition of our Bees and Honey will be given as a Premium for only **three new subscribers**, with $3.00; or clubbed with this journal for $1.75.

PATENT WIRED COMB FOUNDATION

HAS NO SAG IN BROOD FRAMES.

THIN FLAT BOTTOM FOUNDATION

Has no Fish-bone in Surplus Honey.

Being the cleanest is usually worked the quickest of any Foundation made.

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Montgomery Co., N. Y.

1Atf

Mention the American Bee Journal.

SUPPLIES! Standard Goods. Best shipping point. Reasonable prices. Thirty-page Catalogue free. WALTER S. POUDER, 175 E. Walnut St., Indianapolis, Ind.

12A13t

AGENTS WANTED in every Town and County in America, to solicit subscriptions for the **ILLUSTRATED HOME JOURNAL.** Will allow a Cash Commission on all Subscriptions obtained. This is a fine opportunity for active young people to easily earn several dollars a day. Particulars as to commission, etc., and sample copies of the paper, will be sent to any address.

THOS. G. NEWMAN & SON,
246 East Madison Street, - - CHICAGO, ILL.

Send 50 Cents For my Book, entitled—"A Year Among the Bees," 114 pages, cloth bound. Address

DR. C. C. MILLER,
20Atf MARENGO, ILL.

Any Article that has outlived 22 years of competition and imitation, and sells more and more each year, *must* have *merit.* Dobbins' Electric Soap, first made in 1869, is *just that article.* Those who use it each week, (and their name is legion,) save clothes and strength, and let *soap* do the work. All that we can say as to its merits, pales into nothingness, before the story it will tell, *itself,* of its own perfect purity and quality, if you will give it one trial. Ask your grocer for it. He has it, or will get it. Try it next Monday.

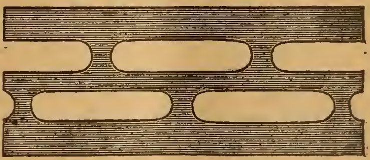
N. B. There are many imitation Electric Soaps in which electricity plays no part. Dobbins' is the original one, all Magnetics, Electrics, and Electro-Magics are fraudulent imitations. Ask for Dobbins' Electric, see that our name is on every wrapper, and if any other is sent you by your grocer, when you order ours,—*send it back to him.*

I. L. Cragin & Co.,
Philadelphia, Pa.

5A1y

Mention the American Bee Journal.

PERFORATED ZINC!



We can now furnish strips of Perforated Zinc with 2 rows of holes, ¾x19, manufactured by Dr. G. L. Tinker, at the following prices:

100 to 500,	per hundred	$1.60
500 to 1,000,	"	1.55
1,000 to 2,000,	"	1.50

All orders promptly filled.

THOMAS G. NEWMAN & SON,
246 East Madison St., - CHICAGO, ILL.

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HOME JOURNAL

An Elegant Monthly for the

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50 Cents a Year.

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It is a moral and intellectual educator, and is invaluable in every library, as well as a very attractive and inspiring ornament in every drawing-room.

Its historical and biographical sketches, as well as its stories, are charming; its departments for the Young Folks, for the Household, and for the Family Circle are very interesting, and all who examine it are sure to become regular subscribers. It captivates them all.

A Sample Copy will be sent FREE, upon application to the publishers.

The Ladies' Fashion Journal has been purchased by and is now consolidated with the ILLUSTRATED HOME JOURNAL. Each issue will hereafter contain an elaborate Fashion Department, and the **Latest Fashions** from London, Berlin and Paris will be illustrated and described. What to buy, and how to have it made. It will also have appropriate articles on Millinery, Toilet Matters, Decorative Art, and Household Embellishment.

I TELL you what, Jones, **Levering Bros.** sell the best goods and at the lowest price of any one I've struck yet. The largest and best equipped

Bee-Hive Factory

in the West. The new DOVE-TAILED HIVE A SPECIALTY. Everything used by practical bee-keepers, by wholesale and retail. Send for our 1891 Illustrated Price-List, and save money. Address

LEVERING BROS., Wiota, Cass County, Iowa.
6A26t

CALIFORNIA HONEY!

I AM prepared to furnish Pure Extracted Honey in 60-pound tin cans. New cases and cans; graded goods. Carloads a specialty.

Address **E. LOVETT, San Diego, Calif.**
21Atf

Mention the American Bee Journal.

HANDLING BEES

A **PAMPHLET,** treating of the taming and handling of bees. Just the thing for beginners. It is a chapter from **"The Hive and Honey-Bee, Revised."** Price, **8 cts.** Advice to beginners, Circulars, etc., free.

CHAS. DADANT & SON,
1Atf Hamilton, Hancock Co., Ills.

EXTRA THIN

COMB FOUNDATION,

IN 25-POUND BOXES.

WE CAN now furnish the **Van Deusen** extra thin flat-bottom Foundation, put up in 25-pound boxes, in sheets 16½x28 inches, at $13.75 per box, 12 feet to the pound.

☞ The above is a **SPECIAL OFFER,** and is a **BARGAIN** to all who can use that quantity. All orders for any other quantity than exactly 25 pounds (or its multiple) will be filled at the regular price, 68 cts. per pound.

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ITALIAN AND ALBINO QUEENS at the lowest prices.
Address R. H. SCHMIDT, New London, Wis.
17A13t

Bee Hives, Sections, Etc.

BEST of goods at lowest prices. We make **15,000** Sections per hour. Can fill orders promptly. Write for free, **ILLUSTRATED CATALOGUE.**

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THOS. G. NEWMAN & SON,
246 East Madison Street, - CHICAGO ILL.
17A—5Mtf

THE AMERICAN BEE JOURNAL
CIRCULATES
ALL OVER THE WORLD
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

Our Club Rates are: $1.90 for two copies (to the same or different post-offices); and for THREE or more copies, 90 cents each.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVII. June 11, 1891. No. 24.

Editorial Buzzings.

Use full sheets of comb-foundation in brood-frames and sections.

The Rainfall for the past week has been generous, and has benefited the growing crops. The roots have been much strengthened, and the coming sunshine will develop the grain, flowers, and fruit. The crop outlook is greatly improved, and the reports indicate that everything is in fine condition.

Young Queens ordered from breeders are not being received as soon as expected or promised. The weather has been so unfavorable that it has been next to impossible to have them fertilized. Much patience will be needed on both sides, and those who expect to receive them, must give credit for bad weather, and not be unreasonable with the breeders.

Against the Wind is the best way the bees can enter the hives. The hives should face the east, if possible, for most of the wind and rain comes from the west. If this cannot be done, face them to the south.

The Porter Spring Bee-Escape is received and placed in our Museum. This is the newest and probably the most perfect bee-escape yet produced. It is simple, durable and inexpensive, and, when fitted into a board placed between the brood-chamber and super, allows the bees to pass down through it between the two delicate springs, which, partially closing behind them, prevent their return. Attention is directed to the descriptive article by Mr. S. A. Shuck, on page 779, who has tested it very thoroughly, and pronounces it "the best yet devised."

Complimentary notices of the AMERICAN BEE JOURNAL are very frequent, but the following from Dr. J. W. Vance, in the *Wisconsin Farmer*, is appreciated more than usual. The Doctor is one of the most prominent apiarists of that State, and is well qualified to give an opinion. He makes the following remarks:

> We always take pleasure in sounding the praises of the AMERICAN BEE JOURNAL. It is, without doubt, the ablest paper devoted to bee-culture published in this country. It is exclusively a *bee-paper*, and eminently free from egotism. The straightforward and square dealings of its proprietors, and the generous and attractive spirit of its editorial management, especially commend it. It is always fresh; and each weekly issue is filled with the latest apicultural news, and able and well-written articles upon bee-keeping.

Bees Fight when being united, unless sprinkled with peppermint water to destroy the scent. This is in answer to one of our correspondents at St. Catherines, Ont.

Honey—Pure Nectar.

The last issue of the *Bee-Keepers' Review* has "Adulteration of Honey" as its special topic. It is quite exhaustively treated. There are some things, however, which we wish to comment upon, and we will here give the gist of the arguments.

Byron Walker starts out by saying that "the Bee-Keepers' Union ought to prosecute adulterators." On page 119 he adds: "What we need is a Bee-Keepers' Union of at least 5,000 members; then we can compel these corporations to respect the laws enacted for our protection."

This is a proposition upon which we must entirely disagree with Mr. Walker. The National Bee-Keepers' Union was not created for such a purpose. It was constituted simply for "defense," and not to wage an aggressive warfare against adulteration, or any other moral or social evil!

Remarking on this subject, the editor of the *Review*, on page 128, says:

> As I understand it, a change in the constitution of the Union would be necessary before money could be used for this purpose; but, if the Union *could* put an end to what adulteration there is, and, what is of far more importance, *convince the public* of this accomplishment, I believe its usefulness would be increased a thousand fold.

Brother Hutchinson is quite right—a *change* in the Constitution would be necessary before it could undertake any such a superhuman task. More than that, it must also *change* its executive officer. The present General Manager could not consent to undertake any such an impracticability!

While, perhaps, it should not be publicly admitted, it is nevertheless *a fact*, that there is no sure "method by which the adulteration of honey can be detected."

Pure honey has very *often* been analyzed and pronounced adulterated by chemists in New Jersey, Ohio, Illinois, and other States, and even the United States chemist has *blundered* in many ways when endeavoring to enlighten the public on the matter of honey-adulteration. Samples which we *know* were genuine, have been branded as either "adulterated," or "probably adulterated" — simply because there is no reliable test for such analysis.

Honey varies so much in its component parts that no analysis of it can be reliable! That from the hillsides varies in color from that in the valleys. Atmospheric conditions, soil and climate even change the color as well as the body, flavor and ingredients.

In view of these facts, it would be a wild-goose chase to start the Union after adulterators—especially if there are as many as Byron Walker avers—several hundreds of retailers of such stuff in a city no larger than Detroit! The Union is in better business, and should never leave that, in order to delve into the slums of abominable sophistications!

Let us build on the other wall. Produce honey of such fine flavor, put up in such admirable condition for market, and properly labeled with the producer's name and address, that a *demand* will be created for that honey, and the guarantee for purity shall be the name of the apiarist, and not "a trade-mark," or the endorsement of any society or periodical.

There are plenty of laws on the statute books in Michigan and other States, and the local bee-keepers can attend to the matter of prosecution without the aid of the Union. Let them follow the example of Harmon Smith, at Ionia, Mich., as is shown on page 129 of the *Review*, in the following words:

> Upon learning that a can of adulterated honey had been sent to a grocer of his town, he went to him and said, "The first pound of that stuff you sell, I'll prosecute you." The "stuff" went back to the mixer.
>
> There was no blow nor bluster—no publishing of the matter in the papers. It was a case of "silent influence."

If such is done promptly, we shall soon hear no more about adulterated honey.

Prof. A. J. Cook very wisely remarks, on page 124:

> Thus let us spread the information that honey stamped with the name and locality of the producer is sure to be pure. Such knowledge will help, not hinder our sales.
>
> Again, if we have not laws against such adulteration and fraud—Michigan has a good law—let us have them. Let us see that any man who sells any product under a wrong name is rendering himself liable to fine and imprisonment. If he stamps his product "glucose and honey," or "manufactured honey," no one will be wronged, and he is welcome to his profits.

Then he adds these paragraphs, to the first of which we have previously made exceptions:

> Having a good law, let us set the law to work, through the Union, to stop the nefarious business. We had a good chance in Detroit last Winter. I would have the Union employ a good lawyer, and have the matter pushed to the bitter end. A few convictions would not only stop the frauds, but would educate the people to the truth that only pure honey could be sold as such.
>
> The Union, through its able Manager, has done right royal service already. There is here a grand opportunity to win even brighter laurels, and to confer, as I believe, a greater benefit upon the bee-keeping industry.

That "trade-mark" foolishness gets a black eye from George K. Weller, on page 122 of the *Bee-Keepers' Review*, in these words:

> The proposed "trade-mark" remedy would only advertise the evil gratuitously, and unless a standard of excellence was agreed on, and every package examined by inspectors, the remedy would be worse than the disease.
>
> There is no way to prevent members of the trade-mark federation from "glucosing" honey, if there is money in it, except through our statute laws, and it would be no aid in enforcing them. It would be a fine cover, under which to dispose of inferior but pure honey, creating a suspicion of adulteration in all who ate it.

Statistics up to May 10, 1891, gathered by the United States Honey-Producers' Exchange, appear in the last number of *Gleanings* as follows:

> The reports up to date indicate that, with the exception of New England, bees have wintered rather better than last year, when they wintered unusually well. The chief cause of the great mortality in New England seems to have been starvation. Some have lost their entire apiaries of 50 to 100 colonies or more, while those who provided them with sufficient stores have wintered with a small loss. Bees are generally reported to be in good condition; but in many cases, at the time of making out these reports, they were short of stores; but as this was only a few days before fruit bloom, they are probably now well supplied, as the weather has been more favorable than usual during that period.

◆

President Elwood receives the following compliment from *Gleanings*:

> Mr. Elwood is not only a successful bee-keeper, a refined and educated Christian gentleman, but he makes an excellent presiding officer for a bee-convention. He has a happy faculty of summarizing the *best* points brought out by the discussion; and when the discussion becomes a little "lopsided," he is pretty apt to call out the other side, although that side be against his experience and sympathies. He will make a good presiding officer for the North American Bee-Keepers' Association next Fall, at Albany.

◆

Too Much Business. — The following was received from one of our regular advertisers, and shows the value of printer's ink when judiciously used:

> Please omit our advertisement one issue. We are crowded with orders, and a good many of our customers are "kicking" on account of the delay. We will pay for the space, if you wish—*anything* to stop this rush.

◆

Convention Notices.

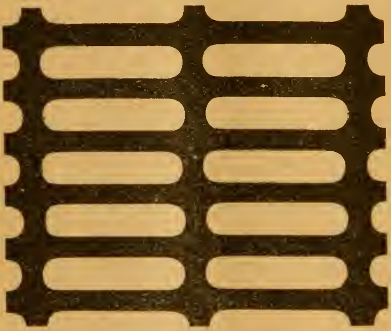
☞ The Rock River Bee-Keepers' Association will meet at Sterling, Ills., on Thursday, Aug. 6, 1891.
J. M. BURTCH, Sec., Morrison, Ills.

☞ The ninth annual meeting of the Susquehanna County, Bee-Keepers' Association will be held on Thursday, Sept. 3. at South Montrose, Pa.
H. M. SEELEY, Sec., Harford, Pa.

Samples of perforated zinc are received from Dr. G. L. Tinker. He has built a new automatic perforator for making the perforations, which operates more rapidly, but does just as accurate and smooth work as his old one. The workmanship is superb, the perforations are exact, the metal is thin and smooth, and the closeness of the holes allows no waste of surface. The Doctor remarks thus in a recent letter:

> My zinc works *entirely satisfactorily* on the new swarmers, and I do not see how it can be improved. It is, *in fact*, perfect. But I greatly prefer the two-rowed zinc in the wood-zinc combination for queen-excluders in hives.
>
> The honey-flow is now on, and a fine one it is. Swarming will engage the attention of bee-keepers here for some weeks. G. L. TINKER.

The accompanying illustration shows the exact size of the perforations in the zinc as made by Dr. Tinker on his new automatic perforator. He is justly entitled to the praise he is getting from all the bee-periodicals for the excellence of his work on his specialties.



Importing Bees.—The following particulars concerning the importation of bees, written by a firm of bee-keepers in Massachusetts, will give some idea of the perplexities attending the getting of bees from Europe:

> Our bees came from Italy by express, via Havre. They passed through the hands of the foreign express company, Baldwin Bros. & Co., 53 Broadway, New York. We were notified by mail from Havre, by an agent there, of the name of the steamer by which they were sent, giving ample time to write to New York and order them hurried through C. O. D. They, however, experienced considerable delay, and a multitude of small charges. The American agent also sent full notice to the local express company to collect the whole bill.
>
> The shipment was billed —— packages —— dollars each, duty being charged on the importers' bill.
>
> So many queens died *en route* that we instructed the agents to send the substitutes by mail, expecting to pay the same duty on them. We have just written to the Treasury Department to learn how much red-tape and official nonsense we may expect in this case. The queens may, and probably will, perish before they are received, but some satisfactory arrangement may be made as a result of the recent agitations. Our queens were 19 days *en route*. * * *

Transferring.—George W. Cook, of Latty, Ohio, sends us the following question:

> On page 32 of his book, entitled "Success in Bee-Culture," Mr. Heddon says, under the head of "Modern Transferring:" "I run them together as I would one colony in two parts." That is the second drive. Will he please explain the process through the BEE JOURNAL?

Mr. Heddon, at our request, responds thus:

I am unable to describe the operation more clearly than has been done in the book. The second drive is poured right at the entrance of the hive containing the first drive, "as one colony in two parts," for they are all from one queen, and still retain about the same scent.

We Club the American Bee Journal and the Illustrated Home Journal, one year for $1.35. Both of these and Gleanings in Bee Culture, for one year, for $2.15.

Bees do not appear to work much on any plant until it has been blossoming some time.

Bees and Cherries.—Mr. C. W. Mueller, of Los Angeles county, Calif., wrote us as follows:

I send you an article from the San Francisco *Chronicle* of May 7. It is the first time I have ever seen or heard anything in favor of the much-despised bee from any fruit-grower.

There was one man, in Fresno county, who was ignorant enough to claim that bees were hurting the peach blossoms, when they were working on them!

I have heard that, in some parts of this county, fruit-growers are putting out honey, mixed with baking powder, to kill the bees.

Bees are very backward here. Sage and other honey-producing plants are getting into bloom, with hardly any chance for the bees to work on them. The weather has been too cold and windy; to-day we had quite a good rain, and if warm weather sets in, they will make up for lost time; if not, there will probably be a poor crop.

Thompson, Calif. C. W. MUELLER.

Here is the article which Mr. Mueller sent. It was copied from the Vacaville *Enterprise*, and headed

Bees and Cherries—Remarkable Facts.

The Bassfords are authorities on cherry culture. Meeting Henry Bassford the other day an *Enterprise* reporter asked if the experiment of keeping bees among cherry trees was not being tried in Cherry Glen. We were informed that such was the fact, and learned much of interest relative to past experiences, present conditions and future expectations.

For several years the cherry crop of Vaca valley has been an uncertain quantity. The famous Smith orchard has not had a first-class cherry crop since 1885, at which time they succeeded in bringing cherries of the early Purple Guigne variety into Vacaville on March 31, and which were shipped to the city and there sold on April 1. Other seasons the cherry crop has been only partially a success.

The reasons for this has been unaccountable, though it has been attributed to the varying conditions of the season, at one time a north wind, another a chilling rain. That these incidents had some effect is no doubt true, but that they were solely responsible was not believed by the Bassfords.

These observant gentlemen, whose experience in cherry growing goes back to a time when the neighborhood of Vacaville was not, as now, a vast orchard, recalled the fact that cherries used to be a sure crop, and sought for the cause of the change.

It occurred to them that the bees, which in the early beginning of the fruit business in this section were numerous in the orchards, and which for several years back had been conspicuous by their absence, had something to do with the success of the cherry crop.

Acting on the theory that the fertilization of the cherry blossom was affected beneficially by the presence of the bees, the Bassfords secured several colonies, and waited results. Last year, the first in which the matter was tested, the result was favorable, the Bassfords having cherries while other ranchers found their crops an entire or partial failure.

This year the Bassfords have about 65 colonies of bees, and if they succeed in making a cherry crop of old time proportions, they will be prepared to vouch for the practical value of the honey-bee as a mascot to a cherry man.

Other orchardists are watching their experience with great interest, and may conclude that, to succeed in cherry culture, a bee-hive and a cherry orchard must be planted side by side.

A Bee-Keepers' College was started in Guelph, Ont., by Rev. W. F. Clarke, on May 30, 1891. Of the class room and apiary the Guelph *Mercury* says:

Mr. Clarke's apiary is located in a beautiful grove, east of Mr. Peterson's well-known park, and consists of 1½ acres, the bees being fenced off in a small enclosure within which is a neat octagonal bee-house, capable of being used for a class room, and will also serve as a repository for the bees in Winter. There are at present 16 colonies—10 of hybrids, 3 Italians, and 3 Carniolans. It is Mr. Clarke's intention to run the apiary both for extracted and comb-honey, so as to illustrate both methods of management.

Colorado Honey Crop.—From all indications there will be double the quantity of honey produced in the Platte valley in 1891 that was produced in the previous year.—*Field and Farm.*

Queries and Replies.

Getting Bees Out of Supers.

QUERY 770.—1. What is the best method of cleaning the bees out of supers when taking off honey? 2. Are any of the various bee-escapes of any account? If so, which is best?—B. K.

1. Brush them from one section at a time. 2. I have had no experience with bee-escapes.—J. M. HAMBAUGH.

1. Use a bee-escape. 2. Yes; most any of them will work, and the simplest home-made one is as good as any.—G. M. DOOLITTLE.

1. Use a bee-escape. 2. Most assuredly. Either Reese, cone, or horizontal. The latter should have a wide opening above.—A. J. COOK.

Try a "bee-escape." They will not all work every time, but are a convenience in many cases. Try the Dibbern and Porter.—EUGENE SECOR.

1. Use some good bee-escape. 2. I have used the Dibbern escape with the best of satisfaction. I think, from what I can see of the Porter, it will work well. Shall try it this season.—H. D. CUTTING.

1. I prefer a good bee-escape. 2. Yes; the Dibbern bee-escape is good, used with a shallow rim beneath. Have no experience with the Porter bee-escape, but believe it to be good.—G. L. TINKER.

1. Any of the escapes will help, and in some cases will make thorough work. For a large number, especially at an out-apiary, I like the little tents of mosquito netting on top of a pile of supers. 2. Reese's latest looks good, but I have not tried it.—C. C. MILLER.

1. Use the horizontal bee-escape in board ¼ or ⅜ of an inch thick, with bee-space on both sides when in place. 2. The escape is all that can be desired when rightly made. The one I invented, and as now improved, is, I think, "boss."—C. H. DIBBERN.

1. I cannot determine the best way. I usually take the sections out one by one, and shake and brush the bees off, putting the sections into an empty case, or handing them to an assistant for that purpose. 2. I have not tried or seen any of the bee-escapes.—M. MAHIN.

1. I do not know. I drive them out as best I can, but as I only keep a few bees, it makes little difference how slowly they do come out. 2. I have had but little experience with bee-escapes, and I do not like them. Others do, and perhaps I should after a long trial.—J. E. POND.

1. Take off the supers late in the evening, and set them near the front of the hive. Use smoke to drive the bees down when you take them off; and then awhile after removal give them a little more smoke. Take supers to the honey-house early in the morning. 2. Yes, sir. —J. P. H. BROWN.

1. There are many good ones, and this is convenient sometimes: Make a bee-tight pile of supers as high as is safe, then put on the open top a hive without the bottom, in which place a comb with young brood, and also a few other combs. The bees will soon gather there. 2. I have not tried them.—R. L. TAYLOR.

Yes. The bee-escapes, when made right, and used in harmony with the instincts of the bees, are a practical success. I do not *know* that I am right; but I recognize only one bee-escape, and that is Reese's. The application of an old principle to a new purpose, embodies the whole thing. In the present light I give Mr. Reese credit for all bee-escapes. —JAMES HEDDON.

1. It has been so long since I have taken off a super of honey that I have almost forgotten. I believe I used to drive them down with smoke, and then carry it into the honey-house. 2. I believe that bee-escapes are a good thing, and have come to stay, but I have never had an opportunity of testing my collection, and am not able to say which is "best."—MRS. L. HARRISON.

1. This is an old question, and nearly every practical apiarist has his own way of doing it. I have a dark closet, standing on legs so that I do not have to stoop much when putting in and taking out the cases filled with honey. The closet has a bee-escape that permits the bees to escape from the dark closet, but prevents them from returning to carry away the honey. When the cases are ready to take off, the bees are smoked down, and the cases are lifted before many of them can return. The cases are immediately carried to the dark closet, and the door closed. At night, the cases, empty of bees, are stored in the honey-house, where the sections are cleaned and crated for market.—G. W. DEMAREE.

1. Use a "bee-escape." 2. You cannot miss it much, if you use the latest improvements in that line.—THE EDITOR.

Topics of Interest.

Groundless Foul-Brood Scare.

F. H. & E. H. DEWEY.

So much has been said about the foul-brood pest in Italy and America, that many will be glad to know that much of the talk is pure sensation.

The American Bee Journal has been the field of more or less discussion of the matter; one article in particular, an extract, reporting prevalence of a very malignant type at the present time in Italy, occasioned an investigation. We sent a few questions to the Italian exporter in Bologna, Chas. Bianconcini, with a view of learning the prevalence of the disease in Italy, the truth of the reports regarding its extent and virulenc in Jesi, the symptoms and evidences of the disease, if they were unique, and the remedies which the Italians use.

He writes: "Happily, in the district (Provincia) of Bologna, and in all this part of Italy we NEVER have had foul-brood; so that all I can say about it is what I have read in apistic books (meaning bee-books) and in the bee-periodicals. So I cannot speak from my own experience, and I suppose in these conditions it is useless to answer your questions, because I could only translate articles of bee-keepers' periodicals. They write me from Jesi, that in that town, and its vicinity, they never had foul-brood, but in a country that is not very far from Jesi, three years ago some colonies had foul-brood. But, generally, this disease is rare in Italy."

So it took three years for the story to reach America! That last sentence, all the recent agitation, especially to the north of us, notwithstanding, describes the condition there—"this disease is rare."

Of the tens of thousands who keep bees, how many have never seen a case! How many also have been misled and mistaken. We once heard of a case of foul-brood which was not contagious. The honey from the dead colony had been fed out, and not the slightest symptoms of the trouble resulted. "Was it foul-brood?" "Certainly; there was the stench, noticeable a rod away; the brood was decayed, and the bees dead." This colony was not very strong.

Upon further inquiry it was ascertained to have occurred during one of those wet, chilly Springs of recent years. So the colony had dwindled, perhaps starved in the dampness and cold in the sight of honey, and the brood decomposed, producing an instance of putrified brood, not foul-brood—foul though it may have been.

For the sake of a little sensation, how much suspicion, groundless anxiety, and, frequently, deep injury, a report or an article that is simply popular and stirring may cause. The same taste for novelty and sensationalism has led into undue conspicuousness many slurs and suspicions against the honey industry, injuring both producer and consumer.

In view of the fact that disquisitions have been as emphatic as if the pest were now epidemic, and since a man with an international reputation at stake has opened to the center one of these airy nothings, flimsy but harmful, is it not time to give the right impression to the public?

The recent discussions that have brought out many valuable points, are for possible prevention, and are not present heroic measures. If statements are made, improperly qualified, they become dangerous misleaders.

Who and how many have received injury from foul-brood by the purchase of bees or queens, in the past year? How many have met with hives or apiaries infested with the pest? If all reports are sifted, we warrant that a very small numeral can stand for the answer to either of the questions.

Westfield, Mass.

Haldimand Bee-Keepers' Convention.

E. C. CAMPBELL.

The Haldimand Bee-Keepers' Association met at Nelles' Corners, Ont., on Saturday, May 16, 1891. President Overholt in the chair.

Minutes of the last meeting were read and adopted.

Twenty-two members reported on wintering, as follows: Total number colonies, Fall of 1890, 793; Spring, 1891, 691; aggregate loss, 102 colonies, or a little more than 12 per cent.

NATURAL VS. ARTIFICIAL SWARMING.

The President did not believe in artificial swarming, and gave several reasons for not following that practice, the chief one being that the queens reared by such colonies were not as good as those reared under the swarming impulse.

Mr. Armstrong favored artificial swarming, as by this means he could manipulate his colonies to the best advantage, but it was necessary that young queens should be on hand to give to the new colony.

Mr. Kindree said he had tried both plans, and preferred natural swarming; he believed it was more profitable.

Mr. Smith was in favor of natural swarming.

Mr. Richardson said he had some experience in both plans, and agreed with most of what Mr. Armstrong and others had said in favor of artificial swarming. His practice was in making a new colony to always give it a queen-cell nearly ready to hatch.

Several members took part in the discussion at this point, and many good things were brought out.

Mr. Armstrong said, in answer to a question, that with him artificial swarming was the best.

SPREADING BROOD-NESTS.

The President thought that spreading the brood-nests would stimulate brood-rearing, but when he went to put it into practice, it reminded him of the boy who was sent to hoe corn. When he came to a good hill he said that it was good enough, and when he came to a poor one, he said that it was not worth hoeing, and he soon got over the field. It was the same way with the bees.

Mr. Armstrong said that when he commenced to keep bees, he thought he knew more than the queen did, and tried to make her lay more eggs by reversing combs and spreading brood-nests, but now he thought the best way to stimulate breeding was to give the colonies plenty of food, and the queen would lay eggs as fast as the bees could take care of them.

Mr. Kindree, Mr. Smith and Mr. Richardson agreed with the remarks made by Mr. Armstrong, and the next question was taken up.

HOW TO REAR GOOD QUEENS.

The President preferred rearing queens under the swarming impulse, as by this means the best queens were obtained.

Mr. Armstrong took his strongest colonies to rear queens, and a few days before the queens were ready to hatch, he prepared nucleus hives, and put in each of them a queen-cell, and left them until the young queens were mated. He also advised the use of a queen nursery.

Mr. Kindree agreed with Mr. Armstrong, except that he made his colony queenless when he wanted to rear queens.

QUESTION DRAWER.

Under this head a large number of questions were asked, and a great deal of useful information elicited.

On motion, Mr. M. Richardson was appointed a director for Caledonia.

Moved that $6 be granted to the Caledonia, Cayuga and Jarvis shows, and $4 to the Dunnville and Rainham shows, on condition that these give twice that amount.

Moved that the next meeting be held at Hagersville, on the last Saturday in August. Carried.

Cayuga, Ont.

That Wonderful Punic Bee.

VERITAS.

Hurrah! The bee-keepers' millenium has dawned, and with that dawning has faded the vision of *Apis Americana*. We old fellows who have worked for a quarter of a century to develop the good and eliminate the bad from what was supposed to be the best honey-bee on earth (excepting, perhaps, *Apis dorsata*, which was not getatable), might as well hang up our horns. Is it not strange that a thing may be so plain before our eyes and yet we do not see it until some one calls our attention to it, and that one generally from a distance.

It is all plain now. The Punic bee originated during the second Punic war, and was a cross between the African pissmire and the Roman mosquito. They retain all the indomitable energy of the pissmire, with the strength of wing of the mosquito.

The centuries have come, and the centuries gone, but Punic remained in the dark, because the bee was dark, and was in the "Dark Continent." But the hustling bee-keepers of America will care less for the origin of a thing than for prospective results. I must be very brief, for I am excited, and in a great hurry to start for Hallamshire for two or three of those wonderful queens, and I expect at least a dozen fellows will get the start of me.

Why, my head fairly swims, and you must make some allowance for this article.

Let us see, a colony will increase to 20, and give 1,000 pounds of the nicest honey in one season. The second year, to 400, and give 20,000 pounds. The third year, to 8,000 colonies, and give 8,000,000 pounds of honey.

O, shades of Colvin, Cary and Quinby! why did you not get the "Punic" instead of the "yellow jackets." By this time we might have had 100 colonies for each man, woman and child in the United States and Canada.

Youngsville, Pa.

Bee-Keeping and Poultry-Rearing.

MRS. S. E. SHERMAN.

Bees and Poultry, says the programme, is my subject. What can I say to this intelligent audience that would interest them upon such small and insignificant things as bees and poultry, when we have such an interesting and all-absorbing topic as cotton and its culture (which has been planted and cultivated almost to the exclusion of every other crop).

It has been said that "cotton is king," and right royally, and (shall I say it) roughly does he sway his sceptre, and rule his subjects with a rod of iron; yet there are many who bow at his feet and worship no other king.

They seem to think that the fleecy staple is the only crop that will bring the cash. They think that biddy and her chicks, and the queen and her progeny, are too small things for them to idle their time away with.

To be sure we, the infinitesimal part of humanity that do not consider these callings beneath our dignity, may not have as much ready cash all at once as he who raises cotton to the exclusion of other things; yet our profits come in all along through the year, something like our expenses, and we who have bees, honey, chickens and eggs to sell all the time, generally manage to have enough change for our current expenses with no mortgage on our homes, to be paid off when the cotton is sold, as is the case with many of our farmers.

Bee-keeping and poultry-rearing are two of the necessary adjuncts to successful agriculture. Their importance is not fully appreciated by our farmers generally, but they are two of their very best friends. The bees not only gather the nectar that is secreted by the flowers, which, ungathered, would dry up and go to waste; but they also fertilize the blooms by carrying the pollen from flower to flower, thus causing more thorough fertilization, and a surer crop of fruit, which is, or should be, of great importance to the farmer.

There have been so many inventions in the last few years, that modern bee-keeping is quite a different thing from what it was in the days of our youth.

Bee-keeping and poultry-rearing work very nicely together. Poultry, for the best results, should be hatched quite early in the season, so that the greater part of the work with them is over before swarming time arrives. They do a great deal of good around a place—more than they often get credit for. They destroy many poisonous and otherwise injurious insects; and they are especially beneficial in an orchard, destroying myriads of insects that would injure our fruit trees, fruit and shrubs; then, too, who of us does not enjoy a nice, tender chicken, fried brown, for our breakfast; the eggs, oh! the delicious eggs, are so good, prepared in a dozen different ways. Why, we would not know how to keep house without plenty of eggs. Then allow me to enter a plea for the chickens.

Farmers' wives and daughters could earn many a dime, and have it of their very own, if they only knew how to manage a little better, and would rid themselves of that false pride and false timidity that too many of them possess. When they work and make anything for themselves it is generally sent to town by their fathers or brothers, who feel like it is a disgrace to carry anything to town to sell unless it is a bale of cotton. So they carry it around to the grocery merchant and say, what are you giving for eggs to-day, or chickens, or honey, or whatever it is they have for sale.

The first offer is generally accepted, if it is only 5 cents per dozen for eggs, etc., etc., to the end of the list, and doubtless they feel relieved when they dispose of them at any price.

Now, if the women would go along themselves, and go to private residences and take a sample of butter, eggs, honey or whatever they have for sale and show it, the chances are that they could make a permanent engagement the year around at living prices, if the articles were first-class, and put up in good style.

They should be very careful about this, and be sure that everything is as good as the sample, and in this way they could soon build up a reputation that would be worth a great deal to them, and what they have for sale would always find a ready market.

Do not be afraid of taking hold of little things, the world itself is made of very atoms. Remember, that you are one of God's creatures, and if you are trying to make an honest living, and always act honorably, you will win respect and come out O. K. by-and-by.—*Read at Farmers' Institute, Belton, Tex.*

Salado, Tex.

Present Indications of the Honey-Crop.

C. W. DAYTON.

There seems to be a surprising amount of interest taken in the arrangement and kind of fixtures to use in the apiary to secure the honey, and a very much smaller interest as to when the harvest arrives, or what flowers shall bring the harvest.

In view of this, I may say that, from ten years' observation, I believe more honey may be gained from a close watch and proper knowledge of the approach and duration of the harvest, than can be gained from any special study or adoption of fixtures.

Our main harvest—in fact, our only harvest along the 42d and 43d parallels in Iowa, Wisconsin, Illinois, Michigan, Indiana, etc.—is the white clover, with an exceptional location now and then where there may be some basswood timber.

About May 21, every year, I am able to discover an occasional white clover blossom. There is not a variation of three days in this in any year. Twelve days more and there will be in blossom small patches of, perhaps, a hundred heads in warm, sunny places. This is from June 1 to 4, and the bees begin to get a little honey, but not enough to show in the hives.

By June 12 they get enough to eat, and if the weather is fine the strong colonies will get a little more. By June 16 or 17, a few combs begin to whiten along the upper edges, and the bees will work in the sections if they are placed close by the side of the brood.

About June 21 to 25, they may gain a pound or two a day. Last season was unusually early, so that this date might have been placed at June 18 to 22, and 1885 was one day earlier than last season.

By June 27, we may extract from the brood-chamber, and by June 30 from the upper stories.

The dryness or wetness of the season may vary these dates of progress, so that the extremes may be a difference of six days, but as the causes which produce this variance must precede the date three or four weeks, it is easy to make the calculation.

This season clover has been checked by dry weather in the early half of May, and since it has been revived by an abundance of rain, so if there is a continuance of the necessary moisture, the main harvest may be lengthened out so as to begin about June 20, and last until July 10. In making my calculations for the honey harvest, I usually allow about four days by keeping that much in advance, and on the safe side, which position is always advantageous.

By this method of figuring it is not difficult to get each honey gathering colony in good condition for business as soon as it presents itself.

Clinton, Wis., May 28, 1891.

Advantages of Using Comb-Foundation.

W. Z. HUTCHINSON.

If the securing of perfect worker-combs is not the chief advantage to be obtained by the use of comb-foundation, it certainly stands second in the list. To be able to hive swarm after swarm, year after year, as bees are ordinarily managed, and *know* that each and every comb will be a perfect worker-comb, is a comfort.

To have each comb in the apiary perfect and straight—so exact a counterpart of all others that there will be no difficulty in interchanging—is a great convenience.

To have such combs that no honey, nor labor of the bees, will be wasted in the rearing and maintenance of a horde of useless consumers, may be a factor that will throw the balance upon the right side of the ledger.

If it were necessary, in order to secure such brood-combs as these, it would be advisable to buy and use foundation, even though the use of starters only in the brood-nest *does* result in a greater surplus.

I presume that to some of you—those who have read my little book, "The Production of Comb-Honey"—it will be a surprise to hear me express such views. I know it is not customary for authors or editors to acknowledge their errors; but let me be author, editor or orator, I shall always proclaim what I believe to be the truth, even if it does contradict my former published conclusions.

Do not imagine that I am ready to "take back" all I wrote in that little book. Far from it. But I wish to make this explanation: When I wrote the book I had practiced, for several years, the plan of hiving swarms on starters only.

With the exception of the last year I had used only the Langstroth hive, contracting it to five frames when hiving swarms. This gave the bees but small space in which to build combs. They could start only a few—five—and all were begun, grew, and were completed at the same time. All grew alike. There was no bulging nor crookedness. Occasionally there was some drone-comb, but not very much, unless the queen was old.

The last year I used the new Heddon hive. This worked nicely, so far as results were concerned, but as I have since handled those combs, and the combs subsequently built in these hives, I find that many of the outside ones are imperfect. Having eight, instead of five frames in which to work, the bees sometimes neglect the outside ones until the center combs were more or less completed, and the result was that the outside combs were not always built straight within the frames.

When such men as Joshua Bull, R. L. Taylor, H. R. Boardman and J. A. Green have experimented largely with the plan of hiving swarms upon starters only, and they say that it cannot be *depended upon* for securing perfect combs, we may well consider the question of hiving our swarms on full sheets of foundation. Perfect brood-combs we *must* have.

Mr. Boardman has told us how we can manage, by cutting out imperfect drone-comb and using it in the sections. He has also told us that we can unite our swarms, in the Fall, with the old colonies, and then sort over the combs, melting the imperfect ones into wax. Still further, he has told us how to have perfect combs built by feeding the bees sugar in the Fall.

But everybody will not adopt these methods. Well, they will have to choose between these and *some* imperfect combs, and the use of foundation. I still believe—in fact, I *know*—that it is an advantage, so far as the securing of surplus is concerned, to allow bees to build their own combs in the brood-nest when plenty of comb or foundation is given them in the supers, and about the only objection that can be urged against the practice, is that it cannot be depended upon to furnish perfect combs under *all* circumstances.

Perhaps the greatest advantage to be secured from the use of foundation, is the rapidity with which it enables bees to furnish storage room when honey is coming in rapidly. Some bee-keepers assert that they can so manage that no honey will be lost, or, at least, not enough to pay for the expense of foundation, if the bees are allowed to build their own combs, even for storage. While I have no disposition to dispute such assertions, I am well satisfied that for the great mass of bee-keepers, foundation in the supers is used at a profit.—*Read at the Toledo Convention.*

Vermont Bee-Keepers' Reunion.

MISS MARCIA A. DOUGLAS.

By invitation from President V. V. Blackmer, of Orwell, the Vermont Bee-Keepers' Association held a reunion at his residence, on Tuesday, May 19. The day was delightful, and in due time the guests began to arrive from all directions, until between 20 and 30 were present. The towns of Orwell, Shoreham, Addison, Leicester, Brandon, Benson, and West Haven being represented.

All seemed in good humor, and their faces wreathed in smiles, having left at home the ordinary routine of care and toil for a day of social enjoyment and a picnic. Before dinner the time was spent in forming and renewing acquaintances.

Now gathered in knots in cool shady spots
The delights of reunion begin;
Some talk of their health, some how to get wealth,
While others long yarns they do spin.

At a little past 1 p.m., "mine host" announced that dinner was ready, and invited the company to repair to the honey-house where a table had been spread and loaded with an abundance and variety of tempting food.

H. L. Leonard, of Brandon, returned thanks.

The waiters were very efficient, and each guest gave evidence of his appreciation by actions which speak louder than words. Between the "dinner and supper"—both of which the man at the head of the table declared he was eating—and at other intervals, jokes and merriment had full sway.

During the afternoon President Blackmer called to order an informal convention, and gave a brief address of welcome, to which several gentlemen happily responded.

Many topics of interest were discussed, and as losses were often alluded to, each was requested to give their loss per cent. during the past Winter. The result of this canvass made the average loss appear to be 27½ per cent. The losses were largely attributed to lack of stores.

R. H. Holmes, of Shoreham, presented the following resolution, which was heartily seconded by all concerned :

Resolved, That we, as bee-keepers, here assembled, feel that we have richly enjoyed this informal gathering, and hope this is the beginning of better times to follow in the future ; that we hereby express our gratitude to our President and his family for the bountiful hospitality we have received, and wish them many years of prosperity, joy and usefulness.

About 5 o'clock the good-bys were spoken, company dispersed, and wended their several ways homeward, having spent a pleasant day.

Shoreham, Vt., May 25, 1891.

Discouragements of Bee-Keeping.

S. I. FREEBORN.

As the bright side of bee-keeping is the one generally presented to the public, some items from the other, or discouraging side, ought to be in order. When I commenced keeping bees 34 years ago, we had no bee-literature of any account to aid us, but we had plenty of pasturage, any amount of of basswood timber, wild flowers, buckwheat, and but few bee-keepers, and nearly every season seemed to be a good one for honey. Honey bore a good price, foul-brood was unknown, and even the moth-miller had not found us out.

The prejudice against bee-keepers by farmers, fruit-growers, and others, of late years existing, was then never mentioned ; but those good old times are past, and the favorable conditions then existing cannot again be enjoyed. This thought discourages one.

The improvements and the advance made in bee-keeping since I began have been marvelous. The movable frame, the extractor, comb-foundation mills, sections, cases, smokers, veils, different races of bees, large factories for the manufacture of supplies, and the excellent literature pertaining to apiculture, now available, have boomed bee-keeping.

All items relating to big honey-yields and rapid increase have been given and copied in agricultural and other papers. These have advertised the business till the result has been that we harvested a countless throng of bee-keepers. As the saying is, "the woods are full of them," and, we might also add, the open ground, too.

Of the thousands who have commenced bee-keeping in the last few years, I am satisfied that, had they known fully the chances and the actual conditions as they existed, half would have turned their attention to something else ; but, being captivated by the big reports of some of the few most favorably situated, to achieve success, they embarked in the venture, not considering the much larger number who have made a failue of the business.

This big crop of bee-keepers is discouraging to me. It may speak well for the advancement of the pursuit and the cheapening of honey for the masses ; but every accession to our ranks is one more rival in the field to lower prices, and share with us the pasturage. A large part of the beginners are inclined to cut prices, which are already low enough.

Another discouraging feature : While bee-keepers are increasing, pasturage is not. Basswood is fast disappearing, buckwheat is not raised nearly as much as formerly ; wild flowers are disappearing before the plow, sheep and cattle. One honey source—white clover—is on the increase, but it is an uncertain honey plant in our climate.

Fifteen years ago I had, including the home apiary, bees in six places, the farthest being ten miles from home, with scarcely a rival that would lessen my crop ; but for several years past bee-keepers have increased to such an extent that last season I occupied only the home apiary, and that was badly trenched upon by surrounding apiaries. The rest of my bees—200 colonies, outside of those kept at home—I moved 28 miles, attempting to get them where there was a reasonable chance to make them pay expenses.

Another cause for discouragement is the appearance of foul-brood at several places in our State.

The price of honey is also discouraging. This year, of all others, it would seem that honey ought to sell on sight ; but many have found it hard to dispose of the little crop that they did have at anything like a fair price.

Honey is not like the staple farm products that have a fixed market value, and that will sell any day when taken to market. You have to look for your honey customer, and then he is not always easily found. I have looked for him sometimes at home, and sometimes abroad; and I have looked as far, even, as New York, and then have not found him.

Still another discouraging feature is, that my bees went into winter quarters light in both bees and stores. I am not sanguine of being able to make a very good report for 1891, even should the season be fairly favorable.

The Bee-Keepers' Union has been a comfort to me in the past; in fact, it sprang into life through my need, and came to my defense for its first work, and is still doing for the fraternity and individuals valuable service. Long may its officers live, and long may its banners wave; but I am discouraged because it does not number thousands where it numbers hundreds.

In justice to ourselves as bee-keepers, it behooves us to be as prompt to chronicle losses and discouragements as we are its of success. I know it is more pleasant to tell of success than failure. We all like to tell a big story, if a true one. But our interests demand both sides; so, let us see to it that we report both sides faithfully.—*Read before the Wisconsin State Bee-Keepers' Association.*

Ithaca, Wis.

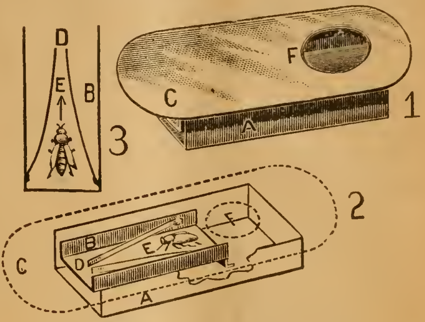
Porter Spring Bee-Escape.

S. A. SHUCK.

I think the artists have succeeded so nicely that there is but little left for me to do more than give the dimensions of the different parts, together with a comparison of the practical workings of the Porter spring escape with that of other escapes now in use.

Figure 1 shows the escape complete, which, when placed in an escape-board, is ready for use. The bees enter the escape at F and pass out at D, as shown in Figs. 2 and 3. The escape proper, as shown at A, Fig. 2, is 2¾ inches long by 1⅛ wide, and ½ inch deep. The top piece C is 4¼ inches long, and 1¾ inches wide. The part B, containing the springs, as shown in Fig. 2, is 1¾ inches long, 1 inch wide, and ¼ inch deep. The object of this inner part, B, is to admit of a depression under F for the reception of dead bees that may chance to get into the escape. A dozen or twenty dead bees may get into the escape and not interfere with the bees passing out between the springs.

To prepare the escape for use, take a plain board of ½-inch material, the size of the top of the hives on which it is to be used. Cleat the board at sides and ends so as to provide the necessary bee-space above or below the board. Bore two holes 2½ inches apart from center to center, and near the center of the board, with a 1⅛ inch bit, and cut out the intervening wood; drop the escape into this opening, and it is ready for use.



PORTER SPRING BEE-ESCAPE.

To adjust the escape-board on the hive, remove the hive cover. A few puffs of smoke are necessary to prevent the bees from becoming angry. Raise the super, place the escape-board on the hive, set the super on the escape-board, and return the hive cover. All is done in less time than is required to write this sentence, yet this is all the time that is required by the bee-keeper to remove the bees from the super, as the bees pass out at their leisure, and the super is taken to the honey-house at any convenient time after the bees have deserted it.

During the season of 1890 I removed all my comb-honey—about 2,500 pounds —from the hives by the use of escapes, and experienced less inconvenience and annoyance by robbers or bees in my honey-house than I have frequently experienced in removing a couple of hundred pounds by the old method of smoking, shaking, and brushing off the bees from the supers.

I used four different patterns of escapes—the cone, trap-door, Porter spring, and Mr. Dibbern's latest pattern. Triple-cone escapes, made of perforated tin, work quite well at times. Occasionally quite a number of bees find their way back through the cones into the super.

The trap-door escape works nicely for a little while, but they are soon rendered useless on account of propolis.

Mr. Dibbern's new escape gave very poor results, as, in my first trial with it, there was very little decrease in the number of bees in a T super in 24 hours after adjusting the escape on the hive. My second trial was but little better, as only about half the bees were out of the super in 24 hours. In subsequent trials it worked some better, but not any better, if as well, as the cone escapes, as the bees are slower in passing out through the Dibbern. I very much dislike the Dibbern escape, for two reasons, *i.* e., it is just as liable to clog up with dead bees as the cone escape is, and there is no way of clearing it out or knowing that it is or is not in working order without taking it apart.

The only objection I see so far to the Porter spring escape is, that it has no *automatic* principle that will extract the bees from the supers in a given time; and the bees of some colonies, under certain conditions of weather, are very slow to move out; but once they are out, they are certain to stay out.

While the bees have shown a disposition to propolize the perforations in the perforated tin cone escapes, and plaster over those made of wire cloth, and glue the doors of the trap-door escapes fast, they have put but very little propolis into the spring escapes—not enough to interfere with the working of the springs in the least.

But little need be said concerning the utility of a practical bee-escape for removing comb-honey from the hives. Any bee-keeper who has gone through the vexations of removing his comb-honey from the hives during a honey dearth, will agree with me that it is anything but a pleasant task; while with a practical escape the vexations are all removed—no brushing, no shaking of bees, no robbing, and no bees in the honey-house. The escape-boards can be adjusted at any time of day, and is done so quickly that the robber bees have no chance to get a start. The supers can be taken off at the bee-keeper's leisure, after the bees have deserted them, which is usually from five to eight hours. Many of my supers were carried in early in the morning, without hat or veil, while the good wife was setting the breakfast.

Concerning the inventors and manufacturers (R. and E. C. Porter, of Lewistown, Ills.) of the Porter spring escape, I will say that, so far as I have been able to learn, they are the oldest practical bee-keepers in this part of Illinois. At present they do not keep a very large apiary, only some 60 or 80 colonies, on account of so many bees near them. In 1882 they obtained between 9,000 and 10,000 pounds of extracted-honey from about 80 colonies. In 1886 they obtained 10,000 pounds from about the same number of colonies.

Their escapes have been as thoroughly tested as one season's work can test them, and they are well enough pleased with them to manufacture and put them on the market at once.

Liverpool, Ills., April 9, 1891.

The above article is taken from *Gleanings*, and the assistant editor (Ernest) makes the following remarks:

Many thanks for your valuable article. We are all anxious to know what we may expect of the bee-escape; and according to your experience, our hopes of its practical utility are not disappointed. If others shall have experience similar to yours, it does indeed promise to work a revolution in the methods of taking off honey, and we have already had some good reports.

We, too, have been experimenting with different styles of bee-escapes; but none do the work so perfectly as the Porter here illustrated. It would get *every bee* out of the upper story—even off combs of brood. With the Reese and Dibbern escapes, a few bees would be left, they having evidently found their way back; and once or twice we found them clogged with dead bees.

We have just received a few samples of the Porter escape. They are beautifully made, and the price is moderate. If this escape shall do as well as it has done for you and ourselves, the two Porters deserve a vote of thanks for a perfect bee-escape, and the right of exclusive manufacture, whether they have a patent on the same or not. We presume a good many of them will be sold, and we should like to have reports of where thorough tests have been made.

The propolizing feature of the Reese and Dibbern, as well as their occasional clogging with dead bees, is rather against them. The brass springs at the point D, in the Porter, are so exceedingly sensitive, that, if a bee were to touch them with its mandibles, I imagine they would tremble so that the little propolizer would become cross-eyed in trying to keep track of the oscillations, and give the matter up in disgust.—E. R. R.

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Clubs of 5 New Subscriptions for $4.00, to any addresses. Ten for $7.50.

CONVENTION DIRECTORY.

Time and place of meeting.

1891.
Aug. 6.—Rock River, at Sterling, Ills.
J. M. Burtch, Sec., Morrison, Ills.

Sept. 3.—Susquehanna County, at So. Montrose, Pa.
H. M. Seeley, Sec., Harford, Pa.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

North American Bee-Keepers' Association

PRESIDENT—P. H. Elwood....Starkville, N. Y.
SECRETARY—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

PRESIDENT—James Heddon ..Dowagiac, Mich.
SEC'Y AND MANAGER—T. G. Newman, Chicago.

Bee and Honey Gossip.

☞ Do not write anything for publication on the same sheet of paper with business matters, unless it can be torn apart without interfering with either part of the letter.

Fine Weather.

The weather is fine, and the outlook was never better for a large yield of honey than at present. I have 100 colonies of bees in excellent condition.

MRS. J. N. HEATER.
Columbus, Nebr., June 1, 1891.

Good Bee Country.

Our bees are in splendid condition, and are swarming. I am confident this would be a good country for bees, if they were given proper care and attention. Black bees are sold here, in box-hives, at $2 to $3 per colony.

Chanute, Kans. T. P. ROBY.

Honey from Persimmon Bloom.

We are having more cold weather and rain, with a northeast wind, and just at the time when the bees should be at work, they are shut up in their hives, by the inclement weather. White clover is still in bloom, and the persimmon trees are just beginning to bloom. The persimmon yields a beautiful, white, clear honey, delicious to the taste. The blossom is small, bell-shaped, with mouth down, consequently the rain does not wash away the nectar, and as soon as the weather will allow the bees to get out, they can be heard roaring among the persimmon blossoms. I have a nice lot of honey just about ready to cap, and also some capped and partly capped. My bees are storing too much honey in the brood-chamber. I have a colony of brown, or German, bees that have not cast a swarm in four years, but always gave me a good lot of honey each year, except last year. Yesterday a very large swarm issued from this colony, and with them came the largest and darkest queen I ever saw. I have seen many queens, both Italians and blacks, but never saw as large a queen as this one. I recovered a swarm of Italian bees from a hickory tree a few days ago, first catching the queen and caging her, then taking a tin pan and securing as many of the bees as possible in it, carrying them to a prepared hive, and as they began to run in releasing the queen among them. Within a few minutes the remainder of the swarm came from the tree and joined the queen in the hive.

JOHN D. A. FISHER.
Faith, N. C., May 27, 1891.

Working on White Clover.

The season so far has been very encouraging for a good honey crop. I have 60 colonies of bees, which are now working nicely on white clover. The apple blossom furnished considerable honey for brood rearing. I have not had any swarms yet, as the wind has been a little bit too high. I think the first warm day will bring them out in a hurry.

H. B. TICKEMYRE.
Shackelford, Mo., June 3, 1891.

Fertilization of Queens.

Fertilizing queens at will is almost simple in warm weather. Put the queen-cells in nucleus colonies to hatch; these colonies not to have more than enough bees to cover and keep warm four frames, or the equivalent of one Langstroth frame, 8½x16⅞ inches. At the apex of the gabel, have a 2-inch hole, covered with wire-cloth, for the purpose of ventilation. When the queen is four days old, close the entrance until 4 p.m., when everything is all right, but at noon on the sixth day be sure to have the selected drones in the same hive, so if neither the queen nor the drones have had a chance to fly, they will pour out at once when the entrance is opened. Have the hive shaded until 4 o'clock, and then let the sun shine on the entrance. If the weather is unfavorable, try again on the seventh day. You will be able to tell in the evening. Queens reared in nuclei are worth more than those reared in larger colonies. Foundation should be dipped so as to have the upper portion stronger, and it must be made on a press, and not with a mill. I have taken out 200 frames in two years, and worked them over, because the cells were oval, and in such shape that no brood was reared in them.

Theresa, Wis. JOHN H. GUENTHER.

Honey-Dew.

Bees are doing quite well, everything considered, but our weather has been so cold that no honey was secreted the most of the time. Many bees are starving, and many colonies have perished, but white clover is just coming out, and if we can only have warm weather everything will go better in the future. On May 28 bees were bringing in honey-dew from the leaves of the soft maple, which seemed to be covered with it, and it was a blessing, as many more would have perished without it. For the last three days it has been so cool that the bees did not fly, and last night it was so cold that tomato plants were killed.

JACOB T. TIMPE.

Grand Ledge, Mich., June 5, 1891.

No Honey from Basswood.

We have had no rain for six weeks, and the timber in my vicinity, which includes a large area of basswood, is without a leaf, and there will be no honey from that source this year. Last Fall I put 53 colonies in the cellar, and on April 10 took them all out, in splendid condition. I never saw bees winter better, but if it does not rain soon, they will suffer. C. A. GOODELL.

Mankato, Minn., May 30, 1891.

Uniting Prime and After-Swarms.

This year is a splendid one for honey; the weather has never been more favorable, and the bees have gathered a more bountiful harvest from apple and peach bloom than for many years. White clover promises well, and bees are already gathering considerable honey from it. Most of the bees in this locality are kept in box-hives, but with indifferent success. I have 11 colonies in box-hives, and 7 colonies in movable frame hives. Can I unite an after-swarm with a prime swarm, after they are hived and both colonies have their hives partly filled? When and how?

Santa Claus, Ind. CHARLES GUTH.

[You can unite an after-swarm with a prime swarm generally without trouble, even if the latter has been hived for a week, by watching carefully. Alternate the frames, and thus mix the bees thoroughly, and they will generally unite peaceably. If they are inclined to fight, smoke them well.—ED.]

Heavy Honey-Flow.

We are in the midst of the honey harvest, and bees are booming on horse-mint, mesquite, niggerhead, and wild china. I never saw as heavy a honey-flow before. OTTO J. E. URBAN.

Thorndale, Tex., May 28, 1891.

Early Swarming.

The bees that survived the Winter in this vicinity are just booming. We have a full bloom on fruit trees, the weather has been fine, and the bees are making the most of it, the blossoms yielding nectar abundantly. From 21 colonies I had 12 swarms in May, beginning on the 20th. I never knew the like before in this vicinity. J. P. SMITH.

Sunapee, N. H., June 1, 1891.

Injured by Frost.

My bees came through the Winter in good condition, and have built up very fast, so that now I have all that I can do to keep down the swarming. White clover is commencing to bloom, but I am afraid that basswood has been injured by frost in this locality. Last night we were visited by a heavy rain, which was very welcome, as we were sadly in need of it. R. M. TOLEBROTEN.

Barber, Wis., June 2, 1891.

The Honey-Bee: Its Natural History, Anatomy, and Physiology. By T. W. Cowan, editor of the *British Bee Journal*, illustrated with 72 figures and 136 illustrations. $1.00. For sale at this office.

Wavelets of News.

Doolittle's Queen-Cups.

We are making cells *a la* Doolittle. His artificial cell-cups work very nicely; and, in fact, during this season of the year it has been about the only way we could get cells at all.—*Gleanings*.

Robber Bees.

If it be necessary to feed some weak colony of bees this Spring, and other swarms begin to rob them, remember the old and simple remedy: Place straw loosely against the hive entrance, and wet it. The robbers in crawling through get wet and lose their grit, stopping the robbing at once.—*Exchange*.

Mistakes Often Made.

To think that a man who has never been able to make a living at anything else (who has failed in everything else), can in the bee-business make a "grand success."

To try to keep 100 colonies of bees through the Summer with the same care that 25 should have, and on a range where 50 would starve.

To neglect proper care in the Winter.

To "rob" them of all their honey, and then curse his "luck" in bee-keeping.

To use all the patent hives and appliances just because a smooth-tongued agent tells him to.

To ventilate his hives by cracks in the roof, and knot holes in the bottom.

To fail to put on proper supers for surplus honey at the right time.

To let the grass and weeds grow around his hives, so that he can hardly find them.—*Nebraska Bee-Keeper*.

Starving in the Midst of Plenty.

In watching the different colonies bringing in pollen, I noticed one large colony where many bees were in the portico and on the ground with out-spreading winds, the picture of distress. I jumped to the conclusion that they were starving, and immediately gave them a section of honey to tide them over until to-day, when I will put on a feeder and give them a liberal supply.

The advent of new bread will start the bees to brood-rearing, and they will consume stores very rapidly, and many large colonies may perish during cold storms unless fed.

Once, on the last of May, I found nearly a peck of bees dead in front of what had been a very large colony; they had starved to death, though it was a fine day; they had consumed their stores rearing such large quantities of brood. As soon as those remaining were fed they set up a happy hum, and the next day there was honey to be gathered in the fields. When bees die of starvation, the queen is the last one to expire, for the bees will give to their mother the last drop that they have, for they realize that the safety of the commonwealth depends upon her life, and what is home without a mother?—MRS. L. HARRISON, in the *Prairie Farmer*.

Chinese Insect Wax.

The Chien-chang Valley, which is about 5,000 feet above the level of the sea, is the great breeding-ground of the wax-insect. One very prominent tree there, is known to the Chinese as the insect-tree. It is an evergreen, with the leaves springing in pairs from the branches, very thick, dark green, glossy, ovated and pointed. In May and June the tree bears clusters of white flowers, which are succeeded by fruit of a dark purple color. The Kew authorities have come to the conclusion that it is *Ligustrum lucidum*, or large-leaved privet.

In March, attached to the bark of the boughs and twigs are numerous brown, pea-shaped excrescences. The larger of these were readily detachable, and, when opened, presented either a whity-brown pulpy mass, or a crowd of minute animals like flour, whose movements were just perceptible to the naked eye.

From 2 to 3 months later these had developed in each case into a swarm of brown creatures, each provided with 6 legs and a pair of antennæ. Each of these was a wax-insect. Many of the excrescences also contained either a small white bag or cocoon covering a pupa, or a perfect image in the shape of a small black beetle.

This beetle is a species of *Brachytarsus*. If left undisturbed, the beetle, which is called by the Chinese the "buffalo," will, heedless of the *Cocci*, continue to burrow in the inner lining of the scale, which seems to be its food; the beetle is, in fact, parasitic on the *Coccus*. When a scale is plucked from the tree, the *Cocci* escape by the orifice which is made.

Two hundred miles to the northeast of the Chien-chang Valley, and separated from it by a series of mountain ranges, is the town of Chia-ting, in which insect-wax, as an article of commerce, is produced. The scales are gathered in the Chien-chang Valley, and are made up in paper packets each weighing about 16 ounces. Sixty of these packets make a load, and are conveyed by porters from Chien-chang to Chia-ting. They travel only during the night, in order to avoid the high temperature of the day, which would tend to the rapid development of the insects and their escape from the scales.

At the stopping places the packets are opened out in cool places, but in spite of this, each packet is found to have lost on an average an ounce in transit. A pound of scales laid down in Chia-ting costs, in years of plenty, about half a crown; in bad years the price is often doubled.

On arrival of the scales from Chien-chang about the beginning of May, they are made up in small packets of from 20 to 30 scales, which are inclosed in a leaf of the wood oil tree. The edges of the leaf are tied together with a rice straw, by which the packet is suspended close under the branches of the ash, or white-wax tree, as the Chinese call it. A few rough holes are drilled in the leaf with a blunt needle, so that the insects may find their way through them to the branches.

On emerging from the scales, the insects creep rapidly up to the leaves, among which they nestle for a period of 13 days. They then descend to the branches and twigs, on which they take up their position, the females doubtless to provide for a continuation of the race by developing scales in which to deposit their eggs, and the males to excrete the substance known as white-wax. This first appears as an undercoating on the sides of the boughs and twigs, and resembles sulphate of quinine, or a covering of snow. It gradually spreads over the whole branch, and attains, after 3 months, a thickness of about a quarter of an inch.

After the lapse of a hundred days the deposit is complete, the branches are lopped off, and as much of the wax as possible is removed by hand. This is placed in an iron pot of boiling water, and the wax on rising to the surface, is skimmed off and placed in a round mould, whence it emerges as the Chinese insect-wax of commerce.

Where it is found impossible to remove the wax by hand, the twigs and branches are thrown into the pot, so that this wax is darker and inferior. The insects, which have sunk to the bottom of the pot, are placed in a bag and squeezed of the last drop of wax, and are then thrown to the pigs.

The wax is used for coating the exterior of animal and vegetable tallow candles, and to give greater consistency to the tallow. It is also said to be used as a sizing for paper and cotton goods, for imparting a gloss to silk, and as a furniture polish.—*Scientific American.*

Cleome in the East.

There seems to be a diversity of opinion regarding the success of *cleome integrifolia*, or Rocky Mountain honey-plant, in the eastern States. Its wonderful success as a honey-producing plant in the plateau divisions of the Rocky Mountain region brought it considerable commendation, and quantities of it were taken East for trial some years ago, and now the reports are coming back to us.

Prof. A. J. Cook, of the Michigan State Experimental Station, and one of the best bee-specialists in the country, planted cleome seed in the Fall, and found it did not come up well in Michigan, although he planted upon both sandy and clay soils. Much to his surprise the blossoms contained no nectar, and bees worked on them only occasionally, so he was forced to report that the cleome was a disappointment. A. I. Root tried cleome last year, but success was not so great, owing, he thinks, to the exceedingly dry season, which had a bad effect on all bee-plants.

On the other hand, Samuel Wilson, of Mechanicsburg, Pa., tried cleome for 3 years, and pronounces it the greatest honey-plant he has ever found. He probably has never experimented with alfalfa, which we hold to be the greatest bee-forage the world has ever known.

Prof. Cook must remember that cleome, so great a success with us, is a leguminous plant, and, like alfalfa, it draws its life and nutriment mostly from the atmosphere. The bright sunshiny days of Colorado contribute largely to its growth, and the absence of these in murky Michigan would necessarily produce an opposite effect. On its native heath the cleome is a triumph, and we regret that our eastern friends have not been more successful with it.—*Denver Field and Farm.*

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

ADVERTISING RATES.

20 cents per line of Space, each insertion.

No Advertisement inserted for less than $1.00.

A line of this type will admit about eight words. ONE INCH will contain TWELVE lines.

Editorial Notices, 50 cents per line.
Special Notices, 30 cents per line.

Transient Advertisements must be paid for IN ADVANCE.

DISCOUNTS:

On **10** lines, or more, 4 times, 10%; 8 times, 15%; 13 times, 20%; 26 times, 30%; 52 times, 40%.
On **20** lines, or more, 4 times, 15%; 8 times, 20%; 13 times, 25%; 26 times, 40%; 52 times, 50%.
On **30** lines, or more, 4 times, 20%; 8 times, 25%; 13 times, 30%; 26 times, 50%; 52 times, 60%.
On larger Advertisements, discounts will be stated, upon application.

Advertisements intended for next week must reach this office by Saturday of this week.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

☞ Subscribers who do not receive their papers promptly, should notify us at once.

☞ Send us *one new* subscription, with $1.00, and we will present you with a nice Pocket Dictionary.

☞ The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to pay for another year.

☞ Systematic work in the Apiary will pay. Use the Apiary Register. It costs:

For 50 colonies (120 pages) $1 00
" 100 colonies (220 pages) 1 25
" 200 colonies (420 pages) 1 50

☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

CLUBBING LIST.

We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

	Price of both.	*Club.*
The American Bee Journal	$1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Guide	1 50	1 40
Bee-Keepers' Review	2 00	1 75
The Apiculturist	1 75	1 65
Canadian Bee Journal	1 75	1 65
American Bee-Keeper	1 50	1 40
The 7 above-named papers	6 00	5 00
and Langstroth Revised (Dadant)	3 00	2 75
Cook's Manual (1887 edition)	2 25	2 00
Quinby's New Bee-Keeping	2 50	2 25
Doolittle on Queen-Rearing	2 00	1 75
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 60	1 50
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	2 20
Western World Guide	1 50	1 30
Heddon's book, "Success,"	1 50	1 40
A Year Among the Bees	1 50	1 35
Convention Hand-Book	1 50	1 30
Weekly Inter-Ocean	2 00	1 75
Toronto Globe (weekly)	2 00	1 70
History of National Society	1 50	1 25
American Poultry Journal	2 25	1 50
The Lever (Temperance)	2 00	1 75
Orange Judd Farmer	2 00	1 75
Farm, Field and Stockman	2 00	1 75
Prairie Farmer	2 00	1 75
Illustrated Home Journal	1 50	1 35
American Garden	2 50	2 00
Rural New Yorker	2 50	2 00
Nebraska Bee-Keeper	1 50	1 35

Do not send to us for sample copies of any other papers. Send for such to the publishers of the papers you want.

◆

If you have a desire to know how to have Queens fertilized in upper stories, while the old Queen is still laying below—how you may *safely introduce* any Queen, at any time of the year when bees can fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact, everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and is as interesting as a story. Price, $1.00. For sale at this office.

◆

Supply Dealers should write to us for wholesale terms and cut for Hastings' Perfection Feeders.

The Convention Hand-Book is very convenient at Bee-Conventions. It contains a simple Manual of Parliamentary Law and Rules of Order for Local Bee-Conventions; Constitution and By-Laws for a Local Society; Programme for a Convention, with Subjects for Discussion. In addition to this, there are about 50 blank pages, to make notes upon, or to write out questions, as they may come to mind. They are nicely bound in cloth, and are of the right size for the pocket. We will present a copy for one new subscription to the BEE JOURNAL (with $1.00 to pay for the same), or 2 subscribers to the HOME JOURNAL may be sent instead of one for the BEE JOURNAL.

◆

When talking about Bees to your friend or neighbor, you will oblige us by commending the BEE JOURNAL to him, and taking his subscription to send with your renewal. For this work we will present you with a copy of the Convention Hand-Book, by mail, postpaid. It sells at 50 cents.

◆

Calvert's No. 1 Phenol, mentioned in Cheshire's Pamphlet on pages 16 and 17, as a cure for foul-brood, can be procured at this office at 25 cents per ounce, by express.

◆

Binders made especially for the BEE JOURNAL for 1891 are now ready for delivery, at 50 cents each, including postage. Be sure to use a Binder to keep your numbers of 1890 for reference. Binders for 1890 only cost 60 cents, and it will pay you to use them, if you do not get the volumes otherwise bound.

◆

Red Labels are quite attractive for Pails which hold from 1 to 10 lbs. of honey. Price, $1.00 per hundred, with name and address printed. Sample free.

◆

A Nice Pocket Dictionary will be given as a premium for only **one new** subscriber to this JOURNAL, with $1.00. It is a splendid little Dictionary—just right for the pocket. Price, **25 cents.**

◆

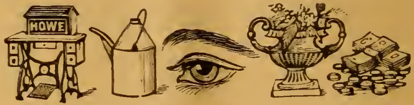
Please send us the names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you.

* * *

$300 CASH.

The Illustrated Home Journal

will give **$100 in Gold** for the **first** correct answer to the accompanying Rebus, received at this office; **$10** each for the next 10; and **$5** each for the next 20. Each answer, to be eligible to competition for the above prizes, must be accompanied by 50 cents for a year's subscription to the ILLUSTRATED HOME JOURNAL.



Everybody Has a Chance to Guess!

THE ILLUSTRATED HOME JOURNAL is an elegant monthly for the Family and Fireside, at 50 cents a year, devoted to Fashion, Music, Household Topics, Decorative Art and Stories. Sample copy free.

Send 50 cents and your answer, before Sept. 1, 1891. We will register each answer, as received, and award prizes on the above date, publishing the names of the lucky contestants in the September issue of the HOME JOURNAL.

THOMAS G. NEWMAN & SON,
PUBLISHERS.
246 East Madison St., **Chicago, Ill.**

* * *

Very Well Pleased. — The Sewing Machine and Scales are received in good order, and I am well pleased with them. They do good work. The sewing machine is ornamental as well as useful. The scales are very handy for family use.—G. RUFF, Burlington, Iowa.

◆

☞ The Union or Family Scale has been received, and I am much pleased with it. W. H. KIMBALL.
Davenport, Iowa.

◆

The Bee-Keepers' Directory, by Henry Alley, Wenham, Mass. It contains his method for rearing queens in full colonies, while a fertile queen has possession of the combs. Price by mail, 50 cents.

◆

Supply Dealers desiring to sell our book, "Bees and Honey," should write for terms.

HONEY AND BEESWAX MARKET.

NEW YORK, June 6.—New crop of Southern honey is now arriving freely. We quote: Extracted, 75@80c; orange blossom, 7@7½c; California, 7@7½c. Beeswax scarce at 28@30c.
HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

KANSAS CITY, June 6.—The demand for honey is very light, especially 2-lb. comb. We quote: Comb, 1-lb., 14@15; 2-lb. 10c. Extracted, 6@6½c. No beeswax in the market.
CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CINCINNATI, June 6.—Trade good in extracted honey, with plenty of the new crop in market. Choice comb-honey in fair demand. We quote: Choice comb, 14@16c. Extracted, 6@8c. Beeswax is in good supply and fair demand at 25@30c for good to choice yellow.
C. F. MUTH & SON,
Corner Freeman & Central Aves.

CHICAGO, June 8.—Demand for both comb and extracted honey increasing, and our stock is light. Can use shipments to advantage. 1-lb. sections, 16@18c; 2-lbs., 14@15c; extracted, 7@8c. Beeswax, 30c.
S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, June 6.—The demand for honey is very light; supply fair, at 12@14c; extracted, 5@7c. All good comb-honey sold out; new crop will be in within 30 days; prospects good. The demand for beeswax is good, at 25@27c; supply light.
HAMBLIN & BEARSS, 514 Walnut St.

CHICAGO, June 8.—Very little comb-honey being sold; prices are about the same, with really very little fancy goods offered. Best white comb, 17@18c; extracted, steady, is in good condition, at 7@8c. Beeswax, 28c.
R. A. BURNETT, 161 S. Water St.

BOSTON, June 6.—No change in prices of honey; sales a little slow, on account of extremely low price of maple sugar. White, 1-lb. comb, 18@19c; fair to good, 14@18c; 2-lb. sections, 16@17c. Extracted, selling at 7½@8½c. No beeswax on hand.
BLAKE & RIPLEY, 57 Chatham St.

ALBANY, N. Y., June 6.—The honey market is slow, with small stocks of comb. We quote: clover, 1-lb. comb, at 15@16c; buckwheat, 12@13c. Extracted, light, slow at 7@8c; dark, firm at 6@7c. Beeswax, 25@27c.
H. R. WRIGHT, 326-328 Broadway.

NEW YORK, June 6.—No comb-honey in the market. Extracted—demand light, except for Southern, which would sell easily at 75@80c per gallon for common, and 7½@8c for Florida. Beeswax scarce and firm at 29c.
F. G. STROHMEYER & CO., 122 Water St.

MILWAUKEE, June 8.—Supply of choice comb-honey is very small, and shipments will find a good market. We quote: Choice, 1-lb. sections, 18@19c; second best, 16@17c; common, 13@15c; dark, 10@12c. Extracted, white, in barrels and kegs, 8@8½c; dark or amber, 6@7½c. Beeswax, 28@30c.
A. V. BISHOP, 142 W. Water St.

SAN FRANCISCO, June 3.—Honey, scarce. We quote: Comb, 1-lb., 13@14c; 2-lb., 10@12c. Extracted, 5½@6¼c. Beeswax scarce, 25@26c.
SCHACHT, LEMCKE & STEINER,
16-18 Drumm

CHICAGO, June 8.—Fancy white 1-lb. comb, 17@18c; fair to good, 15@17c; ordinary, 1@2c less. Extracted—white clover or basswood, in kegs or small barrels, 8@9c; California, 60-lb. cans, 7@8c. Beeswax scarce and in demand at 30@31c for prime yellow.
J. A. LAMON, 44-46 S. Water St.

DETROIT, June 6.—No comb-honey in the market. Extracted, 8@9c. Beeswax firm, at 29@30c. M. H. HUNT, Bell Branch, Mich.

Lots of Replies.

During the year 1888, we had an advertisement running in the American Bee Journal, and we had the same in several Daily and Weekly papers, but to our surprise we received more than double the number of responses from the advertisement in the American Bee Journal, than from all our others combined.

The fact that we are still receiving letters referring to our advertisement in the Bee Journal, shows that it is preserved and read long after it is received. Newspapers are read and thrown aside and that ends it, but the Bee Journal is preserved, and the advertisements are often noticed and bring responses long after they appeared in it.

We regard the American Bee Journal as a first-class advertising medium.

Cedar Rapids High-Speed Engine Co.,
Henry Rickel, *President.*

We send both the Home Journal and Bee Journal for one year, for $1.35.

Bee-Keeping for Profit, by Dr. G. L. Tinker, is a new 50-page pamphlet, which details fully the author's new system of bee-management in producing comb and extracted-honey, and the construction of the hive best adapted to it—his "Nonpareil." The book can be had at this office for 25c.

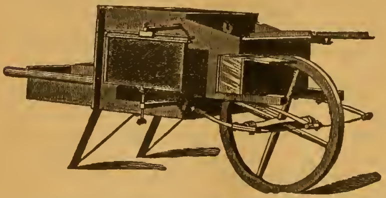
Wants or Exchanges.

Under this heading, Notices of 5 lines, or less, will be inserted at **10 cents per line,** for each insertion. when specially ordered into this Department. If over 5 lines, the additional lines will cost 20 cents each.

WANTED—Your attention! Foundation at Dadant's prices, exchanged for Wax, Hives, Sections, etc., cheap; 2-inch Sections very cheap. St. Joe Apiary Co., St. Joe., Mo.
24A1t

DAVIS' PATENT HONEY CARRIAGE,

Revolving Comb Hanger,



Tool Box and Recording Desk, Combined.

Price, Complete, $18.00.

THOS. G. NEWMAN & SON,
246 East Madison St., - CHICAGO, ILL.

CARNIOLAN QUEENS

THE FINEST IN THE LAND.

ALL reared from Imported stock. Warranted purely mated, 75c each; six for $4.00. Tested, $1.00 each; six for $5.00. Address
24Etf **J. A. ROE, Union City, Ind.**
Mention the American Bee Journal.

All Best Improvements, including **NEW** ones, combined in Foster's Langstroth Hive, New Super, etc. See my new price-list of **Bees, Honey and Supplies.** OLIVER FOSTER,
23Atf Mount Vernon, Linn Co., Iowa.

SPECIAL COMBINATION

Of Vegetable and Flower Seeds, Books, and subscriptions to all the Newspapers and Magazines in the U. S. For particulars, address

COLUMBIAN SUBSCRIPTION AGENCY,
Box 816. **CHICAGO, ILLS.**
14A-5Mtf

Five-Banded Golden Italian Queens!

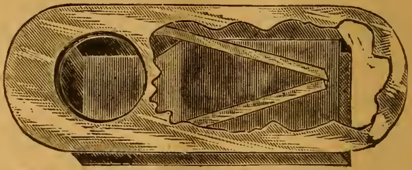
UNTESTED, 75 cents; Warranted, $1.00; Tested, $1.25; Select, $2.00. Three-banded Italians, untested, 60c; Tested, 90c; Select, $1.25. **No disease.** Safe arrival and satisfaction guaranteed. Ready now.
F. C. MORROW, Wallaceburg, Ark.
24A1t
Mention the American Bee Journal.

J. F. WOOD is now ready to ship those WARRANTED QUEENS, the same as gave such good satisfaction last season. See last week's BEE JOURNAL for price. Send for circular, telling how to be successful in introducing.
24Etf J. F. WOOD, North Prescott, Mass.

Italian Queens **For Sale, 1891.**—Tested, $1.00 each; Untested, 75c each. Bees, $1.00 per pound. **Bee-Keepers' Supplies** furnished on short notice. OTTO KLEINOW, 150 Military Ave., Detroit, Mich.
24A1t

TESTED **ITALIAN QUEENS,** $1.00 each. Untested, 75 cts.; 3 for $2.00, or 12 for $7.00. 3-frame Nucleus, with Tested Queen, $3.00. Ready to ship.
23Atf **GOOD BROS., Nappanee, Ind.**

The Porter Spring Bee-Escape!



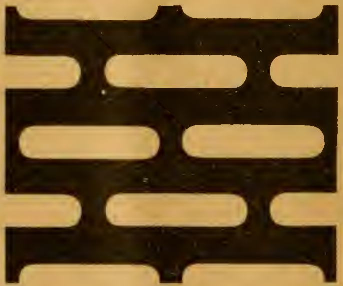
WE guarantee it to be the **Best Escape** known, and far superior to all others. If after three months' trial they are not found **entirely satisfactory,** return them by mail and get your money.

Prices:—Each, with full directions, 20c; per dozen, $2.25. Sent postpaid at same prices. Send for circular and testimonials. Supply dealers, send for wholesale prices.
R. & E. C. PORTER, Lewistown, Ills.
24Atf
Mention the American Bee Journal.

DO YOU WANT reliable help in the apiary? I have 28 years' experience in bee-culture. Write now if you want me.
Address WESLEY DUFF,
24A1t 412 East 22nd St., Chicago, Ills.

PERFORATED ZINC!

WE HAVE the best machinery in the world for making Perforated Zinc. Sheets, 24x44 inches or less. Alternate or opposite round-end perforations in many styles of spacing. Sole manufacturer of two-rowed Zinc. All of our Zinc is smooth on both sides, and **reliably** Queen-excluding. Send stamp for samples and prices. Address



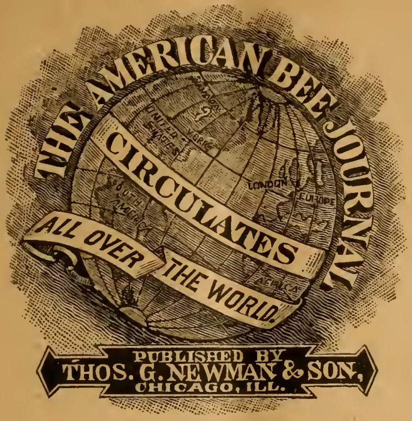
DR. G. L. TINKER, NEW PHILADELPHIA, O.
24A2t
Mention the American Bee Journal.

ALBINO **QUEENS!** Tested, $1.25. Selected Tested, $1.75. Warranted, 75c each. SAFE ARRIVAL GUARANTEED.
24A4t **JOS. MOSER, Festina, Iowa.**

THE FIVE-BANDED

Italians are the prettiest, gentlest and best working bees in existence. They will work on red clover. Warranted Queens, $1.00; 6 for $5.00. Tested, $1.75; select tested, $3.00 to $5.00. Root's famous strain of HONEY QUEENS at same price. Safe arrival guaranteed.

JACOB T. TIMPE, Grand Ledge, Mich.
24Atf
Mention the American Bee Journal.



Our Club Rates are: $1.90 for two copies (to the same or different post-offices); and for THREE or more copies, 90 cents each.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVII. June 18, 1891. No. 25.

Editorial Buzzings.

Keep the honey from the light to prevent granulation.

* * *

Bees are now storing honey very rapidly nearly all over the Northern and some of the Southern States. The present indications are that a very large honey crop will be gathered. Fruit-bloom yielded well, and generously provided the necessary food for brood-rearing. Now the bees are numerous enough to gather an immense harvest.

* * *

A Warm and Moist atmosphere will provide the conditions for an immense crop of honey. This we have, and may confidently expect an unusual honey harvest—unless it is prevented very soon by some unforseen calamity. It now looks as though the lamentations of the Southern weather prophet were wasted and worthless.

* * *

Spraying Fruit Trees.—We have a new pamphlet on this subject by P. C. Lewis, of Catskill, N. Y. It will be sent free upon application. It is refreshing to see that in this book all the instructions are given correctly, such as the following on page 4: "This spraying should be done just after the falling of the blossoms of the apple or plum," etc. It has been difficult to educate on this matter, but we are "getting there" now.

Since the above item was written, we have the news by telegraph that the Spraying Bill, after having passed the House of Representatives of the State of Illinois, lacked two votes in the Senate to become a law. Here is the telegraphic dispatch as published in the daily papers on June 13:

> The House bill providing for the protection of bees from poison through the spraying or otherwise treating of fruit trees and fruit-bearing shrubs, vines, or plants with london purple, paris green, white arsenic, or other virulent poisons while the aforesaid trees, shrubs, vines, or plants are in bloom was read a third time, but failed to pass, receiving but 21 affirmative votes.

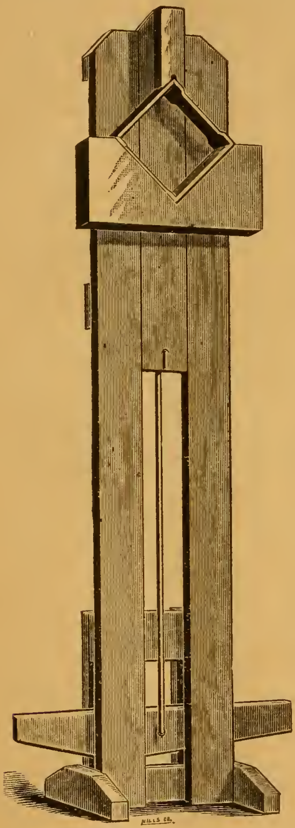
* * *

You Need an Apiary Register, and should keep it posted up, so as to be able to know all about any colony of bees in your yard at a moment's notice. It devotes two pages to every colony. You can get one large enough for 50 colonies for a dollar, bound in full leather and postage paid. Send for one before you forget it, and put it to a good use. Let it contain all that you will want to know about your bees—including a cash account. We will send you one large enough for 100 colonies for $1.25; or for 200 colonies for $1.50. *Order one now.*

* * *

The Nebraska State Fair will be held at Lincoln from Sept. 4 to 11, 1891. Mr. E. Whitcomb, of Friend, Neb., is the Superintendent. Apiarian premiums amount to $237.50.

Beeson's Section-Press is the latest arrival for our Museum. A good idea can be obtained of it from the engraving. It is very simple, easily operated, and is practically automatic. Sections can be put together with marvelous rapidity. As they can be made and sold for the small price of two dollars each, it will not pay for any one to do without such a needful implement.



It is made of poplar lumber, ⅞x2⅜, 39 inches high. The frame is nailed together with six-penny wire nails.

The operator sits in a chair, with the press on the floor and between his knees, with both feet on the treadle. A pressure with the left foot raises the slide-bar and opens the press, thus leaving both hands free to fold the section and place it in the notch-block, when a downward motion of the right foot closes the press and brings the dovetails firmly together. The name of the ingenious inventor is A. Beeson (very significant), and he lives at Loveland, Colo.

What Will the Harvest be? is the general inquiry. The present prospect is indicated by many letters we have received, but the two following, are fair samples of them all:

The honey-flow continues, and I have never before seen bees carry in honey so rapidly, day after day. The white clover bloom will not be out in full before June 20; then our pastures and fields will be carpeted with these fragrant white flowers.—G. L. Tinker, New Philadelphia, Ohio.

My bees wintered on the summer stands, and are now booming. I had 12 colonies, but lost one in the Winter, and had 2 swarms in May. White clover is very plenty here, and linden promises better than at any time in 15 years.—D. A. Merilatt, Elmira, Ohio.

Warm Weather has come, and we think that it will continue awhile. Hard labor is now the lot of the apiarist. Bees need attention, and must have it now. This is the time of harvest. Sweetly speed its coming.

The State Grant of $500 to the Illinois State Bee-Keepers' Association passed both houses of the Legislature.

When Writing a letter be sure to sign it. Too often we get a letter with the name of the post-office, but no County or State. One such came recently, and we looked into the Postal Guide and found there were places by that name in 13 States. That order for goods will have to wait until another letter comes to give the proper address. Be sure to stamp your letter, or it may go to the dead letter office.

☞ The sewing machine I got of you still gives excellent satisfaction—W. J. Patterson, Sullivan, Ills.

Cultivation of Buckwheat.

Mr. Ernest Heald, Grinnell, Iowa, asks us to publish, in the BEE JOURNAL, an article on the sowing and harvesting of buckwheat, which he desires to obtain for bee-pasturage. In reply, we print the following from an exchange, which gives full particulars about its planting, care and marketing:

The grain is one of the best for feeding all animals, but pigs especially; the bran or refuse after grinding is better food than any other, and while the straw is not adapted for feeding, it is, when used as other straw, as free from objection in any way as other straws are.

SOWING.

This crop may be grown in the shortest season. It may be sown from June to July. The 12th of the latter month is the favored time where the grain is grown for making flour for sale, and where its quality is held to be superior to that produced in any other locality.

The best soil is a stony gravel. A considerable quantity of limestone in the soil seems favorably to affect the quality of the grain for flour. But in all cases I have given it as good care as the corn or oat crop.

I have cut the clover late in June, turned the sod under after a few showers have started a new growth, and sowed buckwheat in July, seeding with clover and timothy; have taken a crop yielding $40 or $50 per acre, and the next year have cut hay.

The preparation of the land and the sowing of the seed are too commonly thought to be immaterial, but this is a great mistake. Good plowing and harrowing and covering in the seed are essential to a good yield.

As the early Fall frosts are most to be avoided, a quick start and rapid growth are necessary to this end, and will mature the crop before any danger need be apprehended.

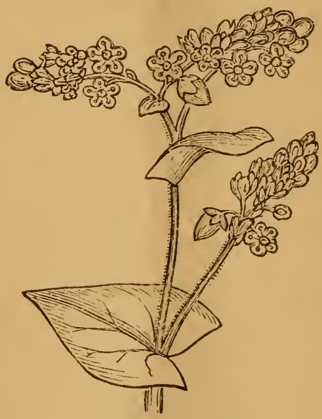
As the grain contains considerable lime, phosphoric acid and sulphur, 9½, 6 and 2¾ pounds in 1,000 pounds of fresh substance, superphosphate of lime, which contains all these, is the best fertilizer, and has a far better result than yard manure, which tends to luxuriant growth and stalk and foliage rather than to grain, and delays the ripening of the seed.

Thin sowing—not more than a peck of seed to the acre—tends to the growth of side branches which bear a profusion of bloom, and largely increases the yield. Thick sowing, on the other hand, forces a tall single stem, with less bloom and seed.

It is a popular belief that the bees detract from the yield of the crop. I have never found it so, but have been confirmed in the belief that the bees are really beneficial in securing the most complete fertilization of the blossoms, with a corresponding increase of grain, and while neighbors have gathered from my work a plentiful yield of honey, this has never been begrudged them from "dog-in-the-manger" objections.

HARVESTING.

The harvesting of the crop requires special care. Buckwheat cannot be stored in a barn. The succulent nature of the plant prohibits this, for it tends to rapid fermentation and heating, and seriously injures the quality of the grain by decomposing the starch in it. The flour is heavy, and does not rise when made from grain which has been suffered to heat, either while in the straw or the granary.



BUCKWHEAT BLOSSOM.

The crop is cut at the time when the grain is mostly ripe. Some of it will yet be green, and some bloom on the stalks will remain as long as the plant stands. Hence, when frost may be expected, the crop should be cut.

Much of the green seeds will ripen in the swath and the gavel. A gavel is a small sheaf not tied up, and this is necessary to the curing of the straw. A cradle, or a reaper which drops in an even swath, is used for the cutting. The grain lies several days in this way if the weather is fine, and is then raked up in small bundles, which are set up in a loose conical form, to admit air through them.

When the grain is dry, it is threshed at once; if by machine, the spiked concave is removed, and a smooth one is used in place of it, to prevent breaking the grain. For the same reason, the feeder should crowd the grain to the full capacity of the machine. The pedicels of the grain are very thin and weak, and are easily broken in threshing, and especially in hauling to the thresher. Hence, blankets or sheets should be spread on the rack to catch the loosened grains.

When threshed, the grain must be cleaned at once, and placed on an airy floor to dry, in a thin layer. Shoveling over to prevent heating is necessary. The grain should be quite dry before it is put in bins, and large bins are not desirable.

The grinding is best done on a dry, windy day, when the very absorbent grain will not gather moisture; and when the grain is to be sold, it should be floured as early in the season as possible.

KINDS OF GRAIN.

There are four kinds of this grain in use—the Merino buckwheat or Indian wheat, of northern New England, which is a prolific, early maturing, but poor flouring kind; the black and grey, or silver-hull, and the now popular and valuable Japanese variety, which has a large grain, and makes excellent flour, and is the most productive of all. The silver-grey, I think, makes the lightest flour, and the best for cakes, and it is a good yielder.

◆

In England, the weather for a part of May was very unseasonable and severe. In North America we had the same experience—the northern hemisphere of the world seemed to have struck a bad spot in the universe. The *British Bee Journal* for May 21 contains the following description of the weather for the middle of the month of May:

> Yet another "experience," such as surely none but dwellers in Britain ever go through. After calculating on a week or two, at least, of settled weather—in fact, after enjoying several successive days of real Summer warmth—a change for the worse occurred on the 15th, simply marvellous in its completeness. Reports from various parts of the country show that the astonishing and unlooked-for disturbance in the weather conditions on that day extended over the whole of the kingdom, some parts, of course, feeling it in increased severity, but everywhere strong winds and squalls of hail and snow have been more or less severely felt.
>
> In London the temperature did not exceed 47° all day, which, with the exception of one day in May, 1869, and May 18, 1872, is the lowest day's temperature during the latter half of May for over forty years. Few counties escaped damage to fruit-bloom through the fierce hail storms which poured down on the tender leaves and bloom with such tremendous force.
>
> Incredible though it seems, ice an inch thick is reported on ponds in northeast Lancashire on the morning of the 17th. It is fortunate that many varieties of fruit are so late in blooming this year as to escape serious damage, but a considerable amount of mischief has no doubt been done in some parts.
>
> Here in Kent, however, the storm was less furious than elsewhere, while the copious rains must have done an incalculable amount of good everywhere, and it would appear as if the worst had come and gone, for to-day (May 19) the weather is bright and warm, so we may now hope for that most delightful of all Spring conditions when vegetation seems to make such progress in the moist, warm soil, that we can almost see it grow.

◆

Sour Honey.—C. T. Bowen, of Lonella, Mo., enquires: "Is soured comb-honey injurious to bees?" We suppose he means if fed to them. We answer, No, if given to them in the Spring or Summer, when they can fly and void their feces. If they do not need it for food, they will work it over and sweeten it, if it is scratched, and allowed to drip, at a time when they are not too busy in gathering honey from the fields.

◆

The Honey-Bee: Its Natural History, Anatomy, and Physiology. By T. W. Cowan, editor of the *British Bee Journal*, illustrated with 72 figures and 136 illustrations. $1.00. For sale at this office.

Queries and Replies.

The Use of Honey-Boards.

QUERY 771.—1. Will bees store as much honey in sections, over a honey-board 5/16 of an inch thick, with four openings, each one inch wide, crosswise of frames, as if placed over the frames without a honey-board? If less, how much? 2. Will honey-boards prevent the storage of pollen in sections?—S.

1. I think not. 2. No.—J. M. HAMBAUGH.

1. No. 2. They will not wholly prevent it.—J. P. H. BROWN.

1. I think so. 2. They do almost entirely with me.—R. L. TAYLOR.

1. Yes. 2. All honey-boards tend to prevent the storing of pollen in the super.—JAMES HEDDON.

1. The opening would be ample, and bees will store just as much honey over it as any other kind.—C. H. DIBBERN.

1. I think so. I could never see that a honey-board lessened the surplus. 2. No; but they tend to, I think.—A. J. COOK.

1. No; but it is hard to answer definitely how much less. 2. No; but probably there will not be so much as if the sections were directly above the brood.—EUGENE SECOR.

1. This is one of those theoretical questions to which an answer can only be guessed at. I think, however, they will gather less; but how much less I cannot even guess. 2. Not in my apiary.—J. E. POND.

1. There would be little if any difference, provided the bees could be induced to start promptly. 2. Whatever removes the sections from the brood will diminish the amount of pollen stored in the surplus apartment.—M. MAHIN.

1. It depends on the start the bees get in the early part of the season. Once started in the supers, they seem to store honey as rapidly through openings such as you mention as they do when no obstruction at all is in the way. But I would not use honey-boards on my hives if they cost me nothing. If your hives and cases are properly made, and properly adjusted, you do not need a honey-board. When taking honey with the extractor, I use zinc queen-excluders to keep the queen out of the surplus cases. But I have thrown away all my honey-boards. 2. Bees instinctively store pollen near the brood. Out of 1,500 one-pound sections last year, not 10 of them contained a few cells of pollen. You may judge from this that honey-boards are not necessary. — G. W. DEMAREE.

1. I do not like your kind of honey-board, yet I do not think it will make any difference. 2. A good wood-zinc honey-board, that will prevent any queen from going through, is a great help in that direction.—H. D. CUTTING.

1. I doubt if there is any appreciable difference. 2. I do not know; but I think they have a tendency that way. Still, I do not remember that I was ever troubled by pollen when using wide frames, without honey-boards.—C. C. MILLER.

1. What do you want such a honey-board as that for? It is going back to the days of our fathers. A queen-excluding honey-board is far preferable in every way, and does not diminish the yield of honey one particle, that I can see.—G. M. DOOLITTLE.

1. This is the old honey-board of Father Langstroth. I do not think it lessens the amount of honey stored in supers where used. 2. Queen-excluders do limit the storage of pollen in sections, and when rightly managed entirely prevent it.—G. L. TINKER.

1. I do not know. 2. I have put on sections without a honey-board, and again used a break-joint one, and in neither case have I been troubled with pollen in them. I should infer that the season and locality had more to do with it than the honey-boards.—MRS. L. HARRISON.

1. They will not store as much if the crop is short, as they sometimes hesitate a long while before placing honey so remote from the brood. As to saying how much less, and saying truly, it is more than we can do. 2. Yes, to a certain extent, and for the same reason. —DADANT & SON.

1. The difference would be very little, if any. 2. Only partially; but the season and conditions have more to do with it than the honey-boards.—THE EDITOR.

Topics of Interest.

Queen-Excluding Honey-Boards, Etc.

G. M. DOOLITTLE.

Allow me, Mr. Editor, to say a few more words relative to Query 767. By the replies to that query I see that some think that not as much honey will be stored above a queen-excluder as there would be if no such honey-board was used. I have very carefully tested this matter, for both comb and extracted-honey, and while I can see no difference in the least in regard to comb-honey, I think that I do see a difference as regards extracted-honey, the same being in favor of the excluders—not against them, as some would have it.

Without the excluders, the queen is bound to spread her brood to her utmost capacity, filling not only the lower story, but much of the comb in the upper story as well. This having brood in the combs you wish to extract from is a great disadvantage in two ways, the first of which is, that you have to handle more combs for the same amount of honey, turn the extractor more carefully so that the unsealed brood may not be thrown out with the honey (thus making a sickish looking mess of the product before it is strained), as well as endangering the life and limb of the queen in getting the bees off the combs; this latter being quite a serious matter, according to my experience.

Then, again, the bee-escape boards are of no use in freeing the combs of bees where the queen is in the upper story, for the bees will not go below and leave her, no matter how good the escape is. Also, the queen will lay the given number of eggs which nature has prepared her to lay, much sooner than she otherwise would, so that the queen arrives at old age, and must be superseded much oftener than is necessary; and all for what? This brings us to the second disadvantage (which the reader probably has already divined), which is that nine times out of ten this brood is only reared at our loss.

Where the queen has access to the whole amount of room given, she increases her egg laying on the arrival of the honey harvest until she often has brood in every frame in the hive used. This brood requires much of the honey brought in from the field to rear it, and, as I said before, nine times out of ten arrives on the stage of action as mature bees, just in time to become consumers instead of producers, thus taking a large part of our honey crop, not only in the brood stage, but in the adult as well.

How often have I seen hives black with bees during the month of August, when there was no honey in the fields to gather by these supernumerary bees, which are hanging on the outside, in perfect idleness day after day. Far better that they had not been reared, for they have not added a single ounce to our crop of honey, but, on the contrary, have consumed pounds of what we might have had.

Now, the queen-excluders give us the privilege of determining just how much brood may be reared after the harvest of honey commences, and the wisest apiarist will place the amount at the point which will allow him bees enough to secure all subsequent crops for that year; for, as a rule, none of the eggs laid by the queen after a honey harvest commences, will be of any direct use in securing honey from the bloom of the kind of flowers which are yielding honey at that time, for it takes 37 days from the time the egg is laid until the bee goes into the fields as a laborer, where a colony is in a normal condition; while no flora, here at the North, with which I am acquainted, gives a continuous yield of honey for that length of time. Inasmuch as the perforated zinc allows us to adapt the number of laborers to the capacity of our field, I consider it one of the greatest inventions of the age; especially so, as it in no way hinders the work in the surplus apartment, no matter whether we are working for comb or extracted-honey.

WHY BEES CLUSTER.

On page 680 I see that Prof. Cook "supposed it settled" that bees always have a home selected when they swarm, and cluster so that the queen may rest her wings, which are unused to flying. No, no, Professor; if such were the fact, why do not the bees go at once to their home, instead of going about the country for days before entering that home, as they are often known to do?

While I fully agree with you that bees "sometimes" have a home picked out before they leave the hive, yet I "guess" you are wrong in supposing that they do always; for I believe that more swarms do not *thus* have a home selected than do, and I will proceed to give the reasons why I believe my guess to be nearer right than yours: In the first place, I have known of very many swarms which have settled "for the queen to rest her wings," and before the one intending to hive them had all in readiness, they "went off"—not to their home which they had selected, but from half a mile to two miles, where they clustered again; not to allow the queen to rest her wings, but for the swarm to send out scouts in this new locality to see if a home could not be found—and in one instance the proof is pretty conclusive that this moving was kept up for a week.

Another thing, which I consider still better proof, is the fact, as I believe it to be, that when bees have a home selected before they swarm, all of the bees go to that home after the swarm starts from the limb—when the queen has become rested, according to the Professor—so that no bees are left hanging about the limb afterward, as is the case where no home is selected, and scouts are sent out to find one.

Who has not noticed from six to fifty bees around a limb on which a swarm has clustered for an hour or more, and then been hived, flying about and alighting on the same for from one to three days afterward, apparently homeless wanderers? These, I claim, are the scouts which have returned to find the swarm gone. I wish to thank the Professor for giving me credit for general correctness along the bee line, the same being more than I deserve; but on this point I am not willing to take a back seat yet, as he will see by the above.

Borodino, N. Y.

How to Make Conventions Successful.

P. BALDWIN.

There are many things which have to be put together in making up an association like ours, in order to have it a living and growing body, that, if nurtured properly, must develop into a full-grown organization that could be beneficial to a large number of the bee-keepers of our State.

I shall not take time, nor space, to speak of all the things that are necessary for such development, but will mention a few points which seem to me to be the most important. God's word says, "How can two walk together except they be agreed," and therefore I think that one of the most important elements in building up and perpetuating an organization like this is harmony and good feeling, one toward another. Let each try to please and benefit others, putting self and self-interest out of the way.

Another way of sustaining and keeping alive our association, is by the discussion of live, interesting and practical questions in bee-culture; not so much for the benefit of the "old heads," as for those who are learning in the pursuit, always remembering that "It is more blessed to give than to receive." What I mean by practical questions are those which relate to every-day experience in the apiary, which the novice can go home and apply for his own profit, thereby helping him in his chosen pursuit, and not those points that are only gained by long study and experiments.

In keeping up our association, I think it advisable and practical to advertise it as extensively as possible through the papers, periodicals, and with cards and letters, thereby gaining a good attendance, which is always a means of enthusiasm and encouragement; and in order to do this it is necessary to have a fair fund in the treasury and live, energetic officers.

I would like to speak of one or two things which are practiced in our association, which has a tendency to destroy its usefulness, and to keep many from attending its gatherings, and that is, that members belonging to it make the meetings a time and place to vend their wares and fixtures, thus occupying the time which might be more profitably employed in the discussion of some vital question that would be elevating to all concerned.

Do not understand me to claim that these things ought not to be exhibited at such places, but when the minds of those who ought to be the instructors and leaders of the association, are so much employed in disposing of their wares, and working for personal aims, instead of for the good of all, it is my opinion that the association with such an ugly sore on its body, has only to have a little time given it when its life will be utterly eaten away, and it will die an untimely death.

There is also another trouble, connected with the perpetuation of our association, and that is the "rule or ruin" policy that we sometimes meet with in our fellowship with mankind, especially in organized bodies. It brings to the surface in human nature that element of character that is narrow and selfish, instead of that broad and ennobling trait that seeks, and loves to labor for, the welfare of others.

There is another thought that presents itself to me that might be of some help in building and keeping alive our association, and that is to get the statistics of as many of the bee-keepers of the State as possible, to publish in the reports of its meetings. This might have a tendency to draw them out to our gatherings, and, being represented in the transactions of the association, they would feel somewhat of a responsibility for its welfare.—*Read at the Missouri Convention.*

Independence, Mo.

Construction and Use of Queen-Excluders.

DR. G. L. TINKER.

It appears from an article on page 737, that Mr. James Heddon is very much concerned about the ideas of Dr. Tinker on the wood-zinc queen-excluder, and its proper construction.

I believe this is not the first time that we have been given to understand that the experience of Mr. Heddon is more valuable and trustworthy than that of other men in our ranks. My many years of careful experience in the use of the queen-excluder, on probably as extensive a scale as Mr. Heddon has practiced, count for nothing in his estimation, and so he proposes to do away with Dr. Tinker's idea that the queen-excluder should be so constructed as to provide ample passageway and ventilation for supers!

How much of this is grounded in reliable experiment, and how much in sheer opposition, will appear to the reader from his reckless statement that "two rows of queen-excluding holes, the length of the Langstroth hive, between the brood and surplus apartments, are enough for the largest colony of bees in the busiest season of the year."

Mr. Heddon should, and probably does, know that two rows of queen-excluding holes in the center of a hive packed with bees, at this time of the year, will give neither proper ventilation nor ample passageway; and, furthermore, the bee-keeper who would trust such an arrangement in getting a crop of honey does not live at Dowagiac, Mich., nor at any other place.

But Mr. Heddon gives us to understand that his two rows of holes "facilitate and encourage bees to enter and rapidly carry on work in the surplus apartment." That kind of assertion (for I believe it to be simply that. and nothing more) may serve his purpose with a few, in doing away with my idea of the necessary requisites of a practical queen-excluder, but I believe the many will reject his assertion, as I do, as being wholly unworthy of confidence.

Again, there is a "serious objection," says Mr. Heddon, to the use of two-rowed zinc, as advised by me, as it will cause "brace-combs and glue," owing to the one-half inch spaces between the slats. Yet he has insisted, almost dogmatically, in the late discussion on burr-combs, that top-bars ⅞ of an inch wide, that require one-half inch spacing, are attended with less burr-combs than any other width of top-bar!

Now, Mr. Heddon assumed that he knew all about brace-combs, and he, no doubt, expected his dictatorial assertions to wind up the discussion, like the springing of a steel trap. But they did not. On the contrary, the outcome of that discussion showed that of those who wrote on the subject, not one knew so little about brace and burr-combs, and how to prevent them, as our over-solicitous friend, James Heddon!

There was only one remedy—his break-joint honey-board; yet the discussion showed that there were a number of remedies, more or less effectual, while his break-joint affair was no remedy at all. Still, he is anxious that the break-joint principle "be preserved," though it was stated in a late issue of *Gleanings*, that there was no longer a demand for his slatted honey-board. It has seen its day, and so this pet and particular hobby of his is about to pass out of use. 'Tis sad!

As to my wood-zinc queen-excluder, made up with two-rowed zinc, I will say this, that when properly used it is rare that burr-combs, in any considerable quantity, are ever attached to it; and as for propolis, it is no worse upon two-rowed than upon one-rowed zinc.

CLEANING OFF THE PROPOLIS.

They are best cleaned by laying them in the hot sunshine until the propolis is soft; then, with a narrow piece of steel, drawn to a thin edge, and made slightly dull, the propolis is easily removed. There may be a difference in localities about the amount of propolis used, but in this locality, where the round end perforations are used (which are far less liable to be clogged up with propolis), they may be used at least two whole seasons, from June to October, without cleaning. When laid away for the

Winter, they should be kept in a dry upper room, free from dust.

As to burr-combs, when bee-keepers shall learn fully how to use the excluder zinc in producing comb-honey, there will no longer be complaint about this greatest of annoyances in handling hives.

Hence, if I shall suggest that Mr. Heddon knows little or nothing about the proper use of the queen-excluder, or of its proper construction, I shall state a fact that even our doubtful brother will be compelled to acknowledge in due time.

New Philadelphia, Ohio.

Fixed or Hanging Frames.

C. W. DAYTON.

Bee-keepers already having hanging frames will do well to stick to them until this closed-end-fixed-distance storm goes by.

I cannot distinguish an advantage of a fixed-distance frame over the movable one, but I can easily see why the unfixed one may be more satisfactory than the fixed one.

There is apt to be brace-combs built between the combs, when they are spaced much more or less than the right distance apart. This right distance is not mathematically exact, and any eye—even not a very mechanical eye—should be able to tell at a glance when the frames are spaced right; this is one of the many minor points connected with bee-keeping that should be learned—to space the frames about right, without the aid of spacers.

It might be well for some to get an empty hive and frames and practice spacing. Any sort of bee-keeper should be able to distinguish the bee-space at a glance, just as readily as the compositor will tell, without measuring, what piece of metal is just thick enough to fill up a line of type. For those who wish to learn the bee-business by going "across lots," spacers are a necessity, but sooner or later they will find out that the "longest way around is often the shortest way through."

If it is to be rules and measures to go by, where is the skill to come in? Every one ought to learn to distinguish the bee-space, because there are so many instances where the space appears. One is led to wonder why the bees have not asked for spacers to aid them in getting the distances to suit them.

When we begin to apply spacers, or any other contrivance to fix the frames, we immediately begin to spoil the frames or hives for rapid and easy manipulation, and these contrivances are only suggested to save the time and labor required to learn to space by eye.

Clinton, Wis.

Bee-Culture in Southern Colorado.

F. O. BLAIR.

This subject can be easily disposed of, partly because there are so few bees kept, but chiefly because I know so little about the matter. I am located in Las Animas county, in the southeastern part of the State, and know absolutely nothing about bees or bee-culture outside of the county, and not much of what is in it.

I have learned that several persons living in the Sunflower bottom, from 5 to 15 miles down the river from Trinidad, have a few colonies each, but only a few. In Trinidad, where I live, only one man, Mr. J. P. M. Butler, has any bees at all besides myself, and he has but 5 colonies. When I came here, three years ago, four other persons had a few colonies each, from one to half a dozen; but giving them little or no care, they have all disappeared by death or removal.

"Foul-brood" appeared in the hives of the man who had the largest number in the Fall of 1888, or the Spring of 1889, and destroyed them all. He sold one colony to be taken to New Mexico, but it died a few months after it reached its destination. After the bees were all dead I persuaded him to burn the hives and contents to prevent the spread of the disease further. No foul-brood, so far as I am aware, has appeared the past season. I should be very glad to learn, if possible, how his colonies became infected with foul-brood when no other apiary within a hundred miles, so far as known, was troubled with it.

When I came to Trinidad and found I was likely to remain, I began to look about to find where I could obtain a colony or two of bees, for I had been accustomed to have them for many years, and felt lonely without them. I sadly missed the ecstatic thrill of a sting now and then; and the delight and inspiration of a honey-bee's hum is to me a perpetual joy. Besides, I needed a supply of honey to sweeten my temper—bee-keepers, on account of nature's sweetness in which they constantly revel, are always sunny tempered—so I began inquiries for bees.

I found a few, but the price demanded was $12 a colony. I could do better than that, and in July, 1888, I received a nucleus from a bee-keeping friend in Marissa, Ills., containing a tested queen, the daughter of an imported Italian. These have multiplied until I now have 18 colonies—fine strong ones, with one exception. I sold one the other day at half what I was to be charged, being disposed to give my neighbor a chance, too.

I use the simplicity hive, with some modifications, being better pleased with it than with any other of a number I have tried. I have made no effort to obtain honey, being anxious to increase the number of my colonies.

The honey-flow was very abundant last season during the month of July and the first half of August, two very seasonable showers having brought forward the honey-producing plants unusually. The labors of the queens were very materially interfered with by having the brood-combs filled with honey. I did not expect to take any surplus, but the busy little pets persisted in crowding it in till I found them so urgent about the matter that I finally yielded, not having the heart to wait longer, and made arrangements for them to store 100 to 200 pounds for me.

I have not lived in Trinidad long enough to speak very intelligently or positively about it as a honey-producing region. Last season was a favorable one. The river bottom is narrow in the vicinity of the city, and market gardens occupy a large share of the tillable land. Very little alfalfa is raised within the range of a bee's flight, and that little is cut so early that it affords no bee-forage to amount to anything.

There has not, as yet, been enterprise enough to plant orchards to any considerable extent, so that the bees gather very little of their luscious sweetness from the fruit blossoms. The wild flowers are their main dependence. Down the river the bottom lands are broader, alfalfa is raised much more extensively, and honey gatherers would undoubtedly prosper; but as yet there are few of them.

The leading honey-producing plants growing in the vicinity of Trinidad, so far as I have been able to observe, are the *cleome integrifolia*, or Rocky Mountain bee-plant, a species of the mountain mint, and, toward the close of the Summer, a kind of dwarf sunflower. The honey gathered from the first two is light colored and pleasant to the taste; while that from the sunflower has a yellowish tint, and a peculiar and less agreeable flavor. I shall endeavor hereafter to get my share of nectar stored early in the season—for that gathered from the mint is especially delicious—and then permit the bees to retain the sunflower honey for their own use.

In some respects the region about Trinidad is more favorable for bee-culture than any other locality in which I have lived. There is not a bee-moth in the country, and an unoccupied hive, filled with comb, can stand through the Summer unmolested.

In Illinois, where I kept bees for many years, eternal vigilance was the price paid for freedom from that detestable pest. There is now, I think, no foul-brood in the region, and the native black bee is not found there; all are Italians. When queens are reared there is no cause for fear that they will not be purely mated.

If proper care be taken in the future, the disadvantages arising from these causes may be avoided, and the colonies of bees be kept healthy; the ravages of the progeny of the bee-moth be prevented, and a race of yellow beauties only be reared to gather the nectar from the mountain sides.

It would seem at first thought that the Mexicans, who form the larger share of the population of Las Animas county, would be the very ones to keep bees. Many of them seem to have been born tired, at least they exhibit no great amount of energy and activity. It might well be supposed that such persons would delight to have thousands of energetic workers laboring for them, that would work for nothing and board themselves; but never a bee does a Mexican keep about Trinidad, as far as I have seen or heard. It would probably upset all their calculations, and take their very breath away to have so much vigor displayed at their doors.

It is not likely that bee-culture can ever be made as great a success about Trinidad as in some other parts of the State, but by proper care and attention it undoubtedly can be made profitable.—*Read at the Colorado Convention.*

Trinidad, Colo.

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Clubs of 5 New Subscriptions for $4.00, to any addresses. Ten for $7.50.

Foul-Brood Spread by Comb-Foundation.

S. CORNEIL.

Now, that some of the most prominent manufacturers of foundation, as well as several editors of the bee-periodicals have expressed their views on the question of infection in comb-foundation, I ask for space for a partial reply, and to give some additional facts bearing on the question.

Mr. Dadant is in error when he says (AMERICAN BEE JOURNAL, page 470) that the number of bee-keepers I alluded to as having raised the question of infection by means of foundation is only four. I wanted to show that the subject is one on which bee-keepers are not agreed, and I quoted four on one side of the question, and four on the other, which was quite sufficient for my purpose.

Since it is evident that Mr. Dadant has missed, or forgotten, these items in the bee-periodicals published in English, the fact that he does not recollect noticing any such items in the periodicals published in France, Germany, Italy, or Switzerland is not good proof that the bee-keepers in these countries have not raised the question. I am sure that bee-keepers "in Europe and America" will not soon forget their deep obligation to Mr. Dadant for the information that, "with Mr. Corneil England is Europe, and the United States America."

Mr. Dadant argues that because Pasteur taught that a temperature of 140° kills the "seeds of disease" in wine, therefore, 150° will kill the spores of foul-brood in wax. I do not so understand Pasteur. Trouessart, in his work on "Microbes, Ferments and Moulds," quotes from Pasteur's book, "Etudes les sur vins," as follows: "The source of the diseases which affect wine consists in the presence of parasitic microscopic plants, which are found in wine under conditions favorable to their development, and which change its nature, either by the withdrawal of what they take for their own nutriment, or, still more, by the formation of fresh products which are due to the multiplication of these parasites in the wine."

From this it is plain that Pasteur does not teach that the spores or "seeds of disease" are killed by a heat of 140°, as alleged by Mr. Dadant, but that it is the growing microscopic plants which are destroyed by this temperature. The spores of these plants or ferments are air germs, introduced before the wine is put into the casks; like noxious seeds in the soil, they are harmless till they germinate and multiply, which they do by budding and bipartition, no spores being formed while the nutriment in the wine lasts.

Mr. Dadant is not the first who has failed to discriminate between spores and microscopic plants in active growth. Regarding such mistakes, Tyndal writes: "The failure to distinguish between these stubborn germs and the soft and sensitive organisms which spring from them, has been a source of error in writings on biogenesis."

In my article, on page 447, I stated that so far as I then knew the lowest temperature at which the spores of bacillus alvei, when in their most resistant condition, are invariably killed had not been determined, nor has it been so far as I yet know; but I now find that good work has been done in this direction, of which I was not then aware. I am indebted to my friend Dr. P. Burrows, of this place, for calling my attention to Vol. XIII, Papers and Reports of the American Public Health Association. This volume contains the report of Dr. G. M. Sternberg, Chairman of the Committee on Disinfectants.

Under the directions of Dr. Sternberg, experiments were made in the biological laboratory of Johns Hopkins University, Baltimore, to test the effects of chemicals on the spores of several kinds of microbes, including the microbe of foul-brood. Dr. Sternberg himself made experiments to test the effects of heat as a germicide, and in two of his experiments he included the spores of bacillus alvei.

His first experiment showed that the spores of foul-brood were not killed by a 10 minutes' exposure to 176°, nor by an exposure of the same duration to 194°; but it showed that they were killed by an exposure for 10 minutes to 212°. The results of the second experiment showed that the spores of bacillus alvei were not killed by an exposure of 2 minutes to 212°, but that they were killed by an exposure of 4 minutes to that temperature.

Such experiments require costly appliances, a great deal of time, patience, skill, and good judgment. The particulars furnished in Dr. Sternberg's Report on Disinfectants, show that his experiments were conducted with the care and skill which beget confidence in the accuracy of the results obtained. Although these experiments were made in the interests of sanitary science, bee-keepers are under great obligations to Dr. Sternberg for ascertaining the thermal death point of the spores of bacillus alvei, when exposed to moist heat. I believe Dr. Sternberg is entitled to the credit of priority in determining this point.

Dr. Sternberg says: "It will be understood that the experiments included in this report relate to *moist heat*, that is to say, the test organisms were in fluid cultures, and in a moist condition. The effects of *dry heat* (italics in both cases are mine) on desiccated organisms is quite another matter. This has been studied by Koch and Wolffhuegel, and their results have been given by Dr. Geo. H. Rohe, in his essay on 'Dry Heat,' in the report of the committee for 1885."

I took the liberty of addressing a letter to Prof. Rohe, explaining the question under discussion, and the ground I had taken, that spores in melted wax are in the position of spores exposed to dry heat, and asked him if he could favor me with a copy of his essay. He very kindly sent me the Report of the Committee on Disinfectants for 1885, containing his essay on "Dry Heat," accompanied by a letter from which I make the following extract:

"Comparing Dr. Sternberg's observations upon the thermal death point of micro-organisms (Public Health, XIII, page 97), I find the resistance of spores of bacillus alvei to be equal to that of B. anthracis and B. tuberculosis, two of our most resistant pathological microbes. Now, Koch and Wolffhuegel showed that a temperature of 248° to 262° F. failed in three hours to destroy the vitality of these organisms. Hence, it seems to me we may extend the same observation to B. alvei. In the absence of direct experiment, it seems to me that your point, *i. e.*, that the heat applied in melted wax is dry heat, is well taken, and I should take your contention as a valid one."

In another series of observations by Koch and Wolffhuegel, it was found that bacillus anthracis was killed by an exposure of 3 hours and 10 minutes to a temperature of 283°. As the result of further observations, they say: "Complete destruction of the spore-bearing organisms did not follow, unless the temperature of 282° had been reached."

Dr. Rohe closes his essay with the following paragraph: "Koch and Wolffhuegel (*Mittheilungen aus dem Kaiserlichen Gesundheitsamte*, page 231) submit the following conclusions, which seem to the writer to be fully justified by the results of their own and other observations here collected." Among the conclusions here referred to by Prof. Rohe, is the following: "Bacillus spores require, for their destruction in hot air, a temperature of 284° F. maintained for 3 hours."

Dr. Sternberg gives a table containing the thermal death point of 37 different micro-organisms, as regards moist heat. The time of exposure required was from 4 to 10 minutes. The lowest temperature required was 122°, and the highest 212°, only five of the organisms requiring the latter temperature for four minutes, and one of these five was bacillus alvei; showing, as Prof. Rohe says, that it is one of the most resistant pathogenic germs known.

From the foregoing I think it is now clear that Mr. Dadant, and others who contend that a temperature of from 140° to 212° is sufficient to sterilize wax, are mistaken. Whether an exposure to, say, 200° for 7 or 8 hours, as in Mr. Hunt's case, is equivalent to 284° for 3 hours, can be only a matter of conjecture in the absence of experiment.

What is required to make sterilization a certainty is a tank having a jacket to which steam, under pressure, can be supplied, the same as is done in packing houses for rendering lard. From all that seems to be known at present, wax kept at from 284° to 290° for 3 hours might be sent out without any qualms of conscience as to its being the means of spreading foul-brood.

I purposed replying to the contention that experience in using foundation proves that it does not spread the disease, and therefore it does not contain live germs of foul-brood, and to show that there is a cause for the partial immunity from the spreading of the disease in this way, which, up to the present, does not seem to have occurred to any of those who have taken issue with me on this subject, but I must not forget Voltaire's remark that the way to be tiresome is to say everything, so for the present I shall "break off."

Lindsay, Ont.

After putting Mr. Corneil's article in type, we sent a copy, in proof, of it to each of the persons who replied to his former article, and here are the criticisms: Mr. Dadant says:

In the foregoing article, after stating, regarding the report of the experiments made by Dr. G. L. Sternberg, that "the results of the second experiment showed that the spores of bacillus alvei were not killed by an exposure of 2 minutes to 212°, but that they were killed by an exposure of 4 minutes to that temperature," the experiments having been conducted with *moist heat*, and quoting the conclusion of Koch and Wolffhuegel, that "bacillus spores require, for their destruction in hot air, a temperature of 284° F., maintained for 3 hours," Mr. Corneil adds:

"It is now clear that Mr. Dadant, and others, who contend that a temperature of 140° to 212° is sufficient to sterilize wax, are mistaken." And further: "From all that seems to be known at present, wax kept at from 284° to 290° for 3 hours, might be sent out *without any qualms of conscience* (italics are mine) as to its being the means of spreading foul-brood."

In answer, I will say that Mr. Corneil has made a great mistake in thinking that wax melted with water, as we do, is heated in *hot air*. During the melting, and long before the boiling of the water, we see the steam produced passing through the melted wax. Our object in melting wax with water, is to wet all particles of extraneous matter, to get rid of them. These particles, when soaked with water, are heavier than liquid wax, and even the smallest and lightest substances sink to the bottom.

Sometimes we find bits of paper, which, soaked with wax, are so transparent that it seems impossible to separate the two substances, yet when our cakes of wax are cold, we find the paper altogether clear of wax. Suppose that, instead of paper, we have a spore of foul-brood, will this spore remain dryer than the paper? Consequently, we are right when we hold that all the spores of foul-brood are killed by the temperature of boiling water, since we maintain this temperature in our boiler for more than 4 minutes.

Besides, although we have certainly worked wax from foul-broody combs by the thousand pounds, and as our bees, which have free access to our wax bins, and to the barrels in which we put the refuse of our meltings, have never been affected with foul-brood, can we not, without any qualms of conscience, continue to manufacture comb-foundation by the same methods that we have used so far?

In calling our attention to this prejudice, as it is entertained by some bee-keepers, Mr. Corneil has done a service to our community; for it seems that I have well demonstrated that foul-brood cannot be scattered by comb-foundation, as the beeswax is sufficiently heated.

CHAS. DADANT.

Mr. M. H. Hunt sends us the following in reply to Mr. Corneil:

All of my beeswax is now refined in a wooden tank, and the steam goes directly into it, which must raise the temperature to a very high point—so much so, that after shutting off the steam the wax will remain liquid all night. It is necessary to have the steam go directly into the wax to heat it above the boiling point. Water cannot be heated above the boiling point, unless it is confined. This great heat kept up through the day, and again remelting the wax to sheet, must, according to Mr. Corneil's own figuring, be all that is necessary to destroy the germs.

M. H. HUNT.

Mr. E. R. Root gives his views of the matter, and replies to Mr. Corneil in the following words:

Mr. Corneil is, I think, magnifying a mole hill into a mountain. All history of foundation making, and its use, is against his argument as above stated. Permit me to say that I have tried the experiment repeatedly, of putting foundation, made from diseased combs, into our hives, and I never noticed any disease that ought to have developed later, according to Mr. Corneil's argument. Has our Canadian friend tried the experiment himself?

In the next to the last paragraph he intimates that the wax should be kept at a temperature of 284° or 290° for *three hours*, before running into foundation. Does not Mr. Corneil know that this would very nearly ruin wax for foundation making? Experiments in our own factory have shown that we could not go much above the boiling point. If I am correct, Mr. Corneil's remedy, then, is beyond the reach of application.

Our friend makes a distinction between dry heat and moist heat for killing germs. I have no doubt he is right; but I somewhat question his grounds, that melted wax has only a *dry* heat effect upon any possible germs that may be present in it.

I do not say that this *is* so—I simply raise the question. If this is true, it will not disprove the figures which Mr. Corneil gives from the eminent scientists whom he quotes, nor will it prove that foundation may be the means of propagating foul-brood; because, if 211° is sufficient to sterilize wax at a *moist* heat, then we apprehend no danger.

Allow me to repeat, by way of emphasis, that all history of foundation is against Mr. Corneil's position.

ERNEST R. ROOT.

[On page 448, Mr. Corneil approvingly quoted this remark: "An exposure of 1½ hours to a temperature of 212° appeared to be equivalent to an exposure of 15 minutes at 228°"—just one-sixth of the time. The difference between 212° and 257°, the point at which spores are surely killed, is 45°. If that 1½ hours are reduced to one-sixth of that time by the increase of 15° in temperature, then 1½ hours at 212° equals 5 minutes at 257°. And Mr. Corneil affirms that "it has been ascertained that a long exposure to a lower temperature produced the same effect as an exposure to a higher temperature for a shorter time."

Dr. Sternberg shows that the death point in micro-organisms was from 122° to 212°, and that 5 out of 37 of the strongest of them required 4 minutes of moist heat to cause death, and one of that five was bacillus alvei (foul-brood microbes).

Now, instead of subjecting these microbes for 4 minutes to 212° in making comb-foundation, the wax is held at over 212° for 24 hours, as shown by Mr. Dadant's statement on page 470. Surely, this is more than sufficient to take the life out of even the strongest microbes; as they are for 360 times the length of time exposed to the temperature required to kill "one of the most resistant pathogenic germs known."

There is not, therefore, the slightest excuse for further agitation of the question, or for the suspicion that the use of comb-foundation, when properly made, can possibly aid in spreading the disease.—ED.]

◆

Prospect for Fall Honey.

White clover is a failure here, on account of the drouth of preceeding years. Bees are now living on honey-dew and raspberry bloom. Basswood blooms about July 1, and lasts but a day or two. It now seems that a Fall flow of honey may be reasonably expected.—MRS. L. HARRISON, Peoria, Ills.

CONVENTION DIRECTORY.

Time and place of meeting.

1891.
Aug. 6.—Rock River, at Sterling, Ills.
J. M. Burtch, Sec., Morrison, Ills.

Sept. 3.—Susquehanna County, at So. Montrose, Pa.
H. M. Seeley, Sec., Harford, Pa.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

North American Bee-Keepers' Association

PRESIDENT—P. H. Elwood....Starkville, N. Y.
SECRETARY—C. P. Dadant......Hamilton, Ills.

◆

National Bee-Keepers' Union.

PRESIDENT—James Heddon ..Dowagiac, Mich.
SEC'Y AND MANAGER—T. G. Newman, Chicago.

Bee and Honey Gossip.

☞ Do not write anything for publication on the same sheet of paper with business matters, unless it can be torn apart without interfering with either part of the letter.

Prosperous Season in Nebraska.

Bees are doing finely, and from the present outlook, I predict a prosperous season. Fruit promises a full crop, and the late rains have done an immense amount of good for farmers, fruit-growers and bee-keepers.

G. M. WHITFORD.

Arlington, Nebr., June 8, 1891.

◆

Plenty of Rain.

Bees have been booming on the fruit bloom. Several swarms have issued in this vicinity, and some colonies have stored honey in the sections. White clover began to bloom on the 2nd inst., but I have not seen a single bee upon it yet. The season has been dry until within the last few days, when we have had plenty of rain. I put 17 colonies in the cellar last Fall, and took out 7 this Spring, but now have only 4. The colonies that perished late in Winter lacked stores, but the 3 that died since being put on the summer stands, starved in the midst of plenty of granulated sugar.

JOSIAH DILLON.

Bangor, Iowa, June 4, 1891.

Giving Instruction in Bee-Culture.

East Tennessee is a superior place for bees. My bees commenced bringing in pollen Feb. 17, white clover in April; poplar, May 1; and there is a regular succession of flowers until about Nov. 1. I bought 6 colonies, and have taken 100 pounds of honey, and the season is not over yet. In connection with U. S. Grant University, located here, there is a school of technology, and there is talk of giving instruction in bee-culture. Please answer the following questions through the BEE JOURNAL: 1. How many schools in the United States are giving instruction in bee-culture? 2. Have any of them a well defined course of study? 3. Do classes graduate and receive diplomas? J. G. TETER.

Athens, Tenn., June 5, 1891.

[Will Prof. Cook please answer the above?—ED.]

Smoke from Passing Trains.

My bees are dying with what seems to be diarrhea. They wintered well, and were all right until ten days ago. Would smoke from a passing train injure them? They are located about 30 rods from the track. C. ABBOTT.

Wood River, Nebr.

[It all depends on the lay of the land, and whether the smoke usually beats down on the ground as the trains pass. Of this you can determine on the spot better than any one could at a distance. If the bee-hives are enveloped in the smoke, even occasionally, it would be quite detrimental. The soot would then injure both the color and flavor of the honey, more or less, according to the frequency of contact with the smoke, and the density thereof. It would be better to move them on general principles, rather than let them continue to die off.—ED.]

Refuse to Rear Queens.

We had extremely dry weather until the latter part of May, but the rains then changed our prospects for the better by starting the white clover, although it will be light at best. Caterpillars are denuding the basswood, but in some localities it has, so far, escaped the pests. Bees have bred up finely, and are swarming some, having worked largely on the dandelion, the stunted red and scattering white clover, and gathering pollen from the wild grape, which is quite pentiful. Bees wintered well on the summer stands, but queens have mysteriously disappeared, and the bees refuse to rear queens, although supplied with brood and larvæ, and there are many peculiarities manifested that I never noticed before. Our drouth is now of three years' duration, with some rain, but not enough to thoroughly moisten the earth, and the lakes are lower than ever known before. S. D. HASKIN.

Waterville, Minn., June 5, 1891.

Dividing for Increase.

On May 21 I took brood and bees enough from my 5 colonies for 3 new ones. On June 2 I examined all of them again, and found larvæ less than 4 days old in the combs. When I divided I did not see any queen-cells on any of the combs. For the past week I have had drone and queen-excluders at the entrance of all the hives, which would have prevented the queen from coming out to mate with the drones. Should there have been a queen hatched since dividing? Why should there be larvæ in the combs of all only eleven days after dividing? LONE STAR.

Batavia, N. Y., June 3, 1891.

[The larvæ in the combs 11 days after dividing were undoubtedly from eggs laid by worker-bees in at least 3 of the divisions.—ED.]

Bees in First-Class Condition.

My first swarm issued on June 1, and another June 4. The 2 colonies casting the swarms were hybrids, and had been wintered in chaff hives. Last Fall I had 225 colonies, and have only 206 now. Bees are in first-class condition in this vicinity. G. G. BALDWIN.

Port Huron, Mich.

Black, Shiny Bees.

I am in the same perdicament as Messrs. Wilson, Craig and Peck (see page 737). I have 2 colonies affected—one slightly, the other badly. At any time of the day the bees may be seen tugging at the little black, shiny fellows, as though they wished to get rid of them. They are much shrunken in body, and this makes the head look abnormally large. The first sign of the disease is the shrinking of the abdomen, and then the black, shiny appearance comes on gradually. The colony which is most affected is strong in numbers, and has a very prolific queen, but does not seem to make any headway in honey gathering. I would be glad to know what it is, and the remedy.

G. B. REPLOGLE.

Centerville, Iowa.

Transferring Bees from Box-Hives.

If I transfer my bees from box-hives to those having frames, at this time of the year, will it interfere with their swarming this season? A. F.

[Yes; but it is better to transfer bees early in the Spring, when the combs contain but little honey. If left until now, it would be as well or better not to molest them until after harvest; but if it is necesary, transferring can be done in the middle of the day at any time.—ED.]

Doolittle's Queen-Rearing.

I am very much pleased with "Doolittle's Scientific Queen-Rearing." Out of the first 36 cell-cups I tried, I secured 23 queens. It is the best plan of starting queen-cells that I have ever tried. I let a friend have my copy of the book, and want another one, as I wish to try having queens fertilized *a la* Doolittle. My hives are chock full of "bug juice" [so-called honey-dew]. What shall I do with it? It is still coming in, or I would extract. A. N. DRAPER.

Upper Alton, Ills., June 9, 1891.

[Do anything with it, except to dispose of it as honey.—ED.]

Packages for Extracted-Honey.

I am having correspondence from many bee-keepers, nearly all asking the following question: What are the best marketable packages of extracted-honey? I would advise bee-keepers to ship their extracted-honey to this market in good, tight kegs, in half barrels, or barrels. The majority of people who buy extracted-honey buy it in quantities, and do not want to pay for cans and crates, which add at least a cent a pound to the cost of the honey, as well as time, trouble, and extra freight charges to the shipper. I would also advise the bee-keepers to see that their small sections of comb-honey do not run over one pound each; it is better they should average 14 ounces than 18 ounces. From the numerous inquiries I thought that, had you space in the BEE JOURNAL, this would be the only means of bringing this valuable information to bee-keepers in time to have them profit by it.

J. A. LAMON.

Chicago, Ills., June 10, 1891.

Feeding Swarms, Etc.

1. If a cold, rainy spell of weather follows the hiving of a swarm of bees, do I need to feed them? 2. Does the ringing of bells, or throwing water or dirt among bees, while swarming, cause them to settle? 3. Should I put on the section-case as soon as a swarm is hived?

Manning, Iowa. M. L. BRANSON.

[1. If the cold, rainy spell lasts more more than two or three days, I would feed them. Early May swarms sometimes require to be fed to prevent starvation.

2. It is doubtful if the ringing of bells does any good in causing a swarm to cluster, but the throwing of water with a good fountain pump does.

3. If a queen-excluder is used the sections may be put on at once, otherwise wait at least three days.—G. L. TINKER.]

Cannot Gather Half of the Honey.

On April 11 I placed 50 colonies of bees on the summer stands, most of which were in fine condition. Four colonies were light in bees, but they have good queens, and are building up very rapidly. I lost but one colony, and that one starved in the cellar. My bees have a very large field force, and the combs are well covered with young bees, and on an average six combs of solid, sealed brood, apparently nearly ready to hatch when I examined the brood-chambers last week. We have had a succession of honey-dews during the past week or two, on the burr oaks and box-elders, and the majority of my hives appear to be chock full of honey and brood, and as soon as the brood that is sealed now comes out the bees will be compelled to go to the sections for room, or swarm. My bees gathered pollen the next day after I took them out of the cellar, from the soft maples, and ever since that day they have had honey and pollen to gather, whenever the weather was so they could fly—in fact, every variety of bloom seems to yield pollen and secrete nectar, and now white clover bloom is well under way. Wild grape bloom, also, is well started, so that at present the bees cannot possibly gather half of the honey there is in the field. I expect a good swarming season, and a good crop of honey this year, and am making all preparations necessary to assist the bees in procuring it. Crops are badly damaged by the drouth, though we had a fine rain yesterday morning, but I fear that it was not general.

G. N. Benham.

Red Wing, Minn., June 11, 1891.

◆

Small Loss.

I wintered 45 colonies of bees on the summer stands, and up to date have hived 10 swarms this month. During the eight years I have been engaged in bee-keeping, I have lost but 4 colonies in Winter.

F. A. Kinnear.

Lindenville, Ohio, June 9, 1891.

◆

Cleaning Wood-Zinc Honey-Boards.

What is the best method for cleaning the wood-zinc honey-boards? I have over 100 in use, and many of them have one-half or more of the perforations entirely filled with comb and propolis.

W. E. Forbes.

Plainwell, Mich., June 8, 1891.

[Full directions are given on page 798 of this issue.—Ed.]

◆

Swarms During Fruit-Bloom.

We had an extra good honey-flow this season from the fruit-bloom, and I had 11 swarms from 45 colonies during the time. The first one on May 15. By forming nuclei from the colonies that swarmed first, I have young queens laying. That is early for this locality, as swarming does not usually commence before this time. The clover season is close at hand, and I am ready for it. For a queen-cell protector, nothing that I have seen equals those sold by N. D. West, of Middleburgh, N.Y. No apiarist can afford to be without them. They are cheap, and will last for years. I put some in use to-day.

C. Russell.

Conesville, N. Y., June 8, 1891.

Honey from White Clover.

Last Fall I put 18 colonies of bees into the cellar, and they all came out sound this Spring, but I lost one colony after putting them out. The remaining 17 colonies are booming. One colony cast a swarm on May 21, a second colony swarmed on the 30th, and a third on June 3. We have a fine crop of white clover, and the bees are working on it industriously. They did well on the fruit bloom, and that, together with the sugar syrup which I fed to them previously, put them in good condition for the clover.

J. B. Dunlap.

Rochester, Ind.

◆

New Crop Honey.

We have had some fine weather for bees to work, and they have done exceedingly well. At present they are working in the sections, and the swarming season is about over in this locality. I took about 25 pounds of honey from one colony yesterday, and the prospects are good for a fine crop. Some new crop honey is already in market. We are having more drizzly weather, which confines the bees to their hives.

John D. A. Fisher.

Faith, N. C., June 6, 1891.

◆

Working on the Clover.

Within half a mile of my apiary there are 72 acres of land seeded to alsike and red clover. Last night there was a heavy dew and the bees are perfectly crazy after honey. To-day is the first time I have noticed them working on the clover. This afternoon we had a fine shower of rain, and the prospects, I think, are very good.

Jacob Moore.

Ionia, Mich., June 8, 1891.

◆

Hiving Swarms with the Smoker.

To hive a swarm of bees quickly, use the smoker on them. They will enter the hive quicker from the smoke than from a rain storm. I find this an excellent plan, and can hive a swarm in two or three minutes by this method.

South Park, Ky. J. Shaffer.

◆

The Bee-Keepers' Directory, by Henry Alley, Wenham, Mass. It contains his method for rearing queens in full colonies, while a fertile queen has possession of the combs. Price by mail, 50 cents.

Wavelets of News.

Hiving Box.

When your bees swarm and cluster on the limb of a valuable tree, it is not at all necessary to saw off that limb. Do not do it, but get to work and make a hiving box. Make it of thin lumber, that it may be light, leave it open at top and bottom, and bore eight or ten holes in each side.

Make it of proper dimensions to hold a frame of brood, and fix it on a pole, place the box gently against the cluster, and soon they will leave the limb and adhere to the box, when you can let them down. Place the comb of brood in a hive, and shake the balance of bees in front of the hive.

In hiving a swarm always get the hive to its permanent location as soon as possible. This mistake is often made, and is quite a serious one to the bees, for they begin to mark their location at once on being hived, and many of them are lost when the hive is moved.—WALTER S. POUDER, in *Indiana Farmer.*

Bee-Keeping and Farming.

Apiculture is naturally a part of, and closely allied with, agriculture, inasmuch as the nectar gathered by the one is immediately derived from the same fields and forests that yield the abundant ingatherings of the other. Indeed, the bulk of the honey crop of this country (which is, in round numbers, about 100,000,000 pounds annually), comes from the bee-keeping which is in connection, more or less, with farming. —*Exchange.*

Putting Sections on Hives.

This is the busiest month in all the year for the bee-keeper, for if everything is not attended to promptly now, the expected honey crop will be greatly lessened or entirely lost.

As the first white clover blossoms begin to appear, cases of sections must be put on, and bees must be hived when they swarm. A great many other things that were overlooked will require attention now, and must not be longer delayed if we would succeed.

In putting cases of sections on hives, it is best not to be too fast, and put them on the strong colonies first. It is worse than useless to put them on hives where the bees are unable to cover more than half their combs.

Keep a close watch, and as fast as hives become crowded, put on the sections, and add more as fast as needed. There is not so much need of hurry in taking them off. Better leave them on until all the cells are capped, but should there be a sudden failure in the yield or at the end of the white honey crop, they should be removed without delay.—C. H. DIBBERN, in the *Plowman.*

Returning Swarms.

Last season I tried the plan (with 2 or 3 colonies of bees) of killing the queens and returning the swarms. I shall never adopt that plan as a good one to follow. When a colony gets at swarming heat they will keep it up under this method until the last queen-cells are hatched. The last queens hatched are generally more or less dwarfed from being reared in small cells, which would have been torn down, if the colony had been allowed to follow their natural instincts. By this practice the queens will be of little worth as prolific layers, and the colony never gets in good condition.

The best results are obtained by removing the old queen from the first swarm, and returning the swarm. When the next swarm issues hive it, and return it to the parent colony in the evening of the second day. Or, if it issues late in the day, leave it three nights before returning. The queen returned will usually make quick work of queens and cells alike. I have known this plan to fail, however.—*Stockman.*

Wax Scales on Bottom-Boards.

A swarm of bees always go with a lot of wax scales already protruding from the wax pockets. Not only this, but the sac of every bee is filled with honey. It seems as though the bees intended to carry all the material possible with which to furnish a new home. When there is no comb nor foundation in the hive, then wax scales "get ripe," if the expression is allowable, and drop to the bottom of the hives, before there is opportunity to use them. If the bees are hived upon combs, the scales are stuck upon the combs. Did you never notice how *white* the mouths of the cells of an old black comb appeared soon after bees had been hived upon it? This comes from the scales of wax that have been stuck on it, for a lack of somewhere else to put them.—*Review.*

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

ADVERTISING RATES.

20 cents per line of Space, each insertion.

No Advertisement inserted for less than $1.00.

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On larger Advertisements, discounts will be stated, upon application.

Advertisements intended for next week **must reach this office by Saturday of this week.**

ALFRED H. NEWMAN,

BUSINESS MANAGER.

Special Notices.

☞ Subscribers who do not receive their papers promptly, should notify us at once.

☞ Send us *one new* subscription, with $1.00, and we will present you with a nice Pocket Dictionary.

☞ The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to pay for another year.

☞ Systematic work in the Apiary will pay. Use the Apiary Register. It costs:

For	50 colonies (120 pages)	$1 00
"	100 colonies (220 pages)	1 25
"	200 colonies (420 pages)	1 50

☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

CLUBBING LIST.

We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

	Price of both.	*Club.*
The American Bee Journal	$1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Guide	1 50	1 40
Bee-Keepers' Review	2 00	1 75
The Apiculturist	1 75	1 65
Canadian Bee Journal	1 75	1 65
American Bee-Keeper	1 50	1 40
The **7** above-named papers	6 00	5 00
and Langstroth Revised (Dadant)	3 00	2 75
Cook's Manual (1887 edition)	2 25	2 00
Quinby's New Bee-Keeping	2 50	2 25
Doolittle on Queen-Rearing	2 00	1 75
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 60	1 50
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	2 20
Western World Guide	1 50	1 30
Heddon's book, "Success,"	1 50	1 40
A Year Among the Bees	1 50	1 35
Convention Hand-Book	1 50	1 30
Weekly Inter-Ocean	2 00	1 75
Toronto Globe (weekly)	2 00	1 70
History of National Society	1 50	1 25
American Poultry Journal	2 25	1 50
The Lever (Temperance)	2 00	1 75
Orange Judd Farmer	2 00	1 75
Farm, Field and Stockman	2 00	1 75
Prairie Farmer	2 00	1 75
Illustrated Home Journal	1 50	1 35
American Garden	2 50	2 00
Rural New Yorker	2 50	2 00
Nebraska Bee-Keeper	1 50	1 35

Do not send to us for sample copies of any other papers. Send for such to the publishers of the papers you want.

◆

If you have a desire to know how to have Queens fertilized in upper stories, while the old Queen is still laying below—how you may *safely introduce* any Queen, at any time of the year when bees can fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact, everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and is as interesting as a story. Price, $1.00. For sale at this office.

◆

Supply Dealers should write to us for wholesale terms and cut for Hastings' Perfection Feeders.

Binders made especially for the Bee Journal for 1891 are now ready for delivery, at 50 cents each, including postage. Be sure to use a Binder to keep your numbers of 1890 for reference. Binders for 1890 only cost 60 cents, and it will pay you to use them, if you do not get the volumes otherwise bound.

When talking about Bees to your friend or neighbor, you will oblige us by commending the Bee Journal to him, and taking his subscription to send with your renewal. For this work we will present you with a copy of the Convention Hand-Book, by mail, postpaid. It sells at 50 cents.

Calvert's No. 1 Phenol, mentioned in Cheshire's Pamphlet on pages 16 and 17, as a cure for foul-brood, can be procured at this office at 25 cents per ounce, by express.

The Convention Hand-Book is very convenient at Bee-Conventions. It contains a simple Manual of Parliamentary Law and Rules of Order for Local Bee-Conventions; Constitution and By-Laws for a Local Society; Programme for a Convention, with Subjects for Discussion. In addition to this, there are about 50 blank pages, to make notes upon, or to write out questions, as they may come to mind. They are nicely bound in cloth, and are of the right size for the pocket. We will present a copy for one new subscription to the Bee Journal (with $1.00 to pay for the same), or 2 subscribers to the Home Journal may be sent instead of one for the Bee Journal.

Red Labels are quite attractive for Pails which hold from 1 to 10 lbs. of honey. Price, $1.00 per hundred, with name and address printed. Sample free.

A Nice Pocket Dictionary will be given as a premium for only **one new** subscriber to this Journal, with $1.00. It is a splendid little Dictionary—just right for the pocket. Price, **25 cents.**

Please send us the names of your neighbors who keep bees, and we will send them sample copies of the Bee Journal. Then please call upon them and get them to subscribe with you.

It is a Prize in Itself.—I have just seen the Illustrated Home Journal for June, with the Rebus and offer of prizes for its solution. As the paper, at 50 cents a year, is a prize in itself for the amount, I take pleasure in enclosing it, and if my answer to the Rebus is correct, you can place me as a contestant for the prize. H. E. Laing.

Chicago, Ills.

☞ The Union or Family Scale has been received, and I am much pleased with it. W. H. Kimball.

Davenport, Iowa.

Supply Dealers desiring to sell our book, "Bees and Honey," should write for terms.

We send both the Home Journal and Bee Journal for one year, for $1.35.

Very Well Pleased. — The Sewing Machine and Scales are received in good order, and I am well pleased with them. They do good work. The sewing machine is ornamental as well as useful. The scales are very handy for family use.—G. Ruff, Burlington, Iowa.

Bee-Keeping for Profit, by Dr. G. L. Tinker, is a new 50-page pamphlet, which details fully the author's new system of bee-management in producing comb and extracted-honey, and the construction of the hive best adapted to it—his "Nonpareil." The book can be had at this office for 25c.

Convention Notices.

☞ The Rock River Bee-Keepers' Association will meet at Sterling, Ills., on Thursday, Aug. 6, 1891.
J. M. Burtch, Sec., Morrison, Ills.

☞ The ninth annual meeting of the Susquehanna County, Bee-Keepers' Association will be held on Thursday, Sept. 3, at South Montrose, Pa.
H. M. Seeley, Sec., Harford, Pa.

THE AMERICAN BEE JOURNAL CIRCULATES ALL OVER THE WORLD.
PUBLISHED BY THOS. G. NEWMAN & SON, CHICAGO, ILL.

Our Club Rates are: $1.90 for two copies (to the same or different post-offices); and for THREE or more copies, 90 cents each.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVII. June 25, 1891. No. 26.

Editorial Buzzings.

The Glow and gleam of clover tops
O'erfringe the vendure's bounteous crops,
The shadows deepen in the wold,
And foxgloves ope' their cups of gold,
In June!

◆

This Volume contains 848 pages and closes with the present issue. An Index is one of the most desirable things in a book. As intimated on page 165, we have concluded to give such every six months. The BEE JOURNAL can now be bound annually, or semi-annually, as may be preferred by each subscriber.

◆

We Regret to learn that friend George E. Hilton, Fremont, Mich., has had a severe attack of billious or catarrhal fever. He is now convalescing. He says that competent help has not allowed his business to suffer during his enforced absence.

◆

A Strawberry Grower in Nebraska, after a succession of failures of crops, bought a colony of bees for the sole purpose of fertilizing his strawberries. With the coming of the bees the strawberry vines afterward produced in abundance.

◆

Insects and Insecticides is the title of a practical manual concerning noxious insects and the methods of preventing their injuries, by Clarence M. Weed, D.Sc., Professor of Entomology and Zoology, New Hampshire College of Agriculture and Mechanic Arts; recently Entomologist Ohio Agricultural Experiment Station, etc.

This book has been prepared with the idea of furnishing the farmer, the fruit-grower, the florist, and the housekeeper with a short account of the injurious insects with which they have to contend, and the latest and best remedies for them. It is the only book published in America which covers the whole field. It is profusely illustrated, and handsomely bound in cloth, with embossed cover.

In the introduction there is a short discussion of the Transformations of Insects; Natural Enemies of Injurious Insects; the Principal Insecticides; Methods of applying Insecticides, with especial reference to Spraying; and Directions for Collecting and Preserving Insects. It will be sent to any address on receipt of $1.25, by the author, C. M. Weed, Hanover, N. H.

◆

At the Late Meeting of the Minnesota State Horticultural Society a vote was taken to ascertain what portion of the members were interested in bee-culture, and the vote showed that a large majority were so interested; a cheerful indication.

◆

In Colorado, this year, no other agricultural pursuit will show a greater increase than honey production.

Advanced Bee-Culture is the title of a neat book of 96 pages (price, 50 cents) by W. Z. Hutchinson, Flint, Mich. It begins with the care of bees in Winter, and goes over the whole ground until the honey is off the hives, clearly and concisely touching upon all important points.

The book is worth a better shape and binding. With the pages a little over one-half the size, a more extensive index, and a nice cloth binding, it would have readily sold at a dollar.

The topics presented are as follows: Care of Bees in Winter—Securing Workers for the Harvest—Hives and their Characteristics—Honey-Boards—Sections, and their Adjustment on the Hives—Varieties of Bees—Introducing Queens—Planting for Honey—Specialty Versus Mixed Bee-Keeping—Arrangement of Hives and Buildings—Separators—Shade for Bees—Increase, Its Management and Control—Contraction of the Brood-Nest—Hiving Bees—Comb-Foundation, Its Use and Abuse—Foul-Brood—Queen-Rearing—How to Produce Good Extracted-Honey—"Feeding Back"—From the Hive to the Honey Market—Marketing of Honey—Migratory Bee-Keeping—Out-Apiaries—Apiarian Exhibits at Fairs—Relation of Food to the Wintering of Bees—Out-Door Wintering—Ventilation of Bee-Cellars—Relation of Moisture to the Wintering of Bees—Comforts and Conveniences in the Apiary—Mistakes in Bee-Keeping.

The author has given the "cream" of the discussion of these topics when they were presented in the *Review* during the past three years.

The book contains a fresh, clear and concise yet comprehensive statement of the most important apicultural topics of the day. Every bee-keeper should have a copy. It can be obtained at this office.

◆

Bar Hives have small bars across the top to which the combs are attached, instead of being in frames.

That Wiley Lie is again before the people, but this time it is presented in the light of a "gross libel," and a $500 verdict is recorded against a paper which had given it to the public. The Michigan *Farmer* of last week contained this item:

> The Wiley lie has been nailed at last, and with a $500 verdict. The Detroit *Journal*, some time last year, revamped the old chestnut, and indicated Mr. E. B. Weed, of Detroit, as the "ingenious individual" who was deceiving the public, and even the "bees themselves." No name was mentioned, but the article was worded so that there could be no doubt as to who was meant.
>
> The *Journal* endeavored to show that no one in particular was pointed out; but the judge and jury of the Wayne Circuit Court thought otherwise, and the *Journal* was taxed the above amount for "gross libel."

This was denounced as a "false, slanderous and defamatory statement" on page 416, and the Detroit *Journal* was shown by Harmon Smith to have "grossly adulterated the truth," in its comments upon an invention by E. B. Weed, Grand River Avenue, Detroit, Mich.

We are glad that the Detroit *Journal* has been made to suffer for its reckless statements, and we should like to see a similar course pursued with other papers which persistently misrepresent our pursuit, and lie about its devotees.

◆

You Need an Apiary Register, and should keep it posted up, so as to be able to know all about any colony of bees in your yard at a moment's notice. It devotes two pages to every colony. You can get one large enough for 50 colonies for a dollar, bound in full leather and postage paid. Send for one before you forget it, and put it to a good use. Let it contain all that you will want to know about your bees—including a cash account. We will send you one large enough for 100 colonies for $1.25; or for 200 colonies for $1.50. *Order one now.*

Cross Bees are very undesirable at all times and in all places. Dr. C. C. Miller, in the *Stockman*, very mirthfully writes thus:

> It seems pretty well settled that Italian bees are best.
>
> The proof is that nearly if not quite all extensive honey-producers use them.
>
> I have done with hybrids. They are too cross, and they make me cross.
>
> Cyprian and Holy-Land bees promised great things, but very little is said about them now-a-days. Their general reputation is very far behind that of the Italians.
>
> Carniolan bees have the boom on just now. But the boom is so much in the hands of those who have queens to sell, that it is hard to tell much about the real merits of the bees.

The latest boom is for the Punic bees. But that they are any better than the Italians, it will be difficult to make apiarists in general believe. The descriptions heretofore published have shown much exaggeration.

* * *

Spraying Trees.—This subject is presented by Prof. Gerald McCarthy, in Bulletin No. 76 of the North Carolina Experiment Station. He speaks of using paris green, london purple and bordeaux mixture, and adds:

> To spray one acre of grape vines once, takes about 66 gallons of this mixture, and usually six treatments are required for each season. This gives a total of about 400 gallons per acre, containing about 180 pounds of copper sulphate. All of this copper eventually finds its way into the soil.
>
> Copper salts are a deadly poison to all absorptive plant tissues, and therefore to the roots of cultivated plants. Is there not danger then that the accumulation of this substance in the soil of our gardens and orchards, if persisted in for a series of years, may eventually affect the fertility of the soil? *There is very great danger!*
>
> And let it be understood that when once the soil is sterilized by this poison, not all the guano on the coast of Peru can ever restore an acre to its former state, or make it fit to bear one blade of grass!
>
> The possible danger of using such poisons has already occasioned considerable alarm in Europe. It came up for discussion at the last meeting of the German association of naturalists. It was shown that copper sulphate in the soil soon becomes copper oxide, which is practically insoluble, and remains in the upper stratum of the soil.
>
> The sulphuric acid combines with the potash and lime in the soil, and with them forms more or less soluble compounds, which are washed into the drains, or so far below the reach of most plants as to be practically lost.
>
> Its deleterious action is therefore twofold: It destroys the young roots of plants, and causes the useful potash and lime in the soil to leach away.
>
> When lime is given to the copper before it is sprayed, the baneful effect of the latter upon the potash and lime in the soil is largely prevented, but its evil effect upon the growing plant-roots still remains.
>
> The horticulturist must, therefore, bear in mind that the fungicides he uses are by no means friends to be depended on without limit. They are *necessary evils, to be used with caution* and the greatest economy.

The utmost care is necessary when using these poisons. There is danger to the vegetation, danger to the soil, and danger to the bees, if it is done before the blossoms fall. The caution of Prof. McCarthy is therefore timely and appropriate.

* * *

Dextrine may be used for gumming honey labels, and for pasting labels on wood, tin, etc. It will stick and dry instantly. It is the substance used on postage-stamps, and by express companies for putting on their labels, etc. To use, dissolve it in a little hot water, and apply with a brush, brushing the gum *over* the label, as well as under it.

* * *

Beginners must not expect us to give space to all their questions. Such would be very uninteresting to older apiarists. Buy a Manual and study the nature and habits of the bees, and the simple methods of management. Then expect in the BEE JOURNAL only such as will be of interest to the majority.

World's Fair Exhibit.—The following item was published in the Chicago *Times* of last week. It was gleaned from our correspondence with W. I. Buchanan, Esq., Chief of the Department of Agriculture, about the management of the bee and honey exhibit:

> Thomas G. Newman, editor of the BEE JOURNAL, of Chicago, writes to Chief Buchanan that the International Bee-Keepers' Association, which is the parent society for the United States and Canada, had its meeting last October and selected Dr. A. B. Mason, of Ohio, and R. McKnight, of Ontario, as the managers of the Apiarian Exhibit at the Exposition, subject to Mr. Buchanan's appointment. Mr. Newman says arrangements are forming to make a grand exhibit of bees and honey at the Fair.

Mr. Buchanan will do all he can to provide for a magnificent apiarian exhibition. We have had a visit from him, and he is thoroughly alive to the subject.

◆

Another Victory.—The following letter will fully show that another victory has been obtained by putting the decision of the Supreme Court of Arkansas to good use:

EASTON, Pa., June 10, 1891.

GENERAL MANAGER OF THE UNION:—You can score another victory for the bee-keepers. For a number of years past, a certain confectioner of our city has kept up a quarrel with a couple of his neighbors, who kept a few colonies of bees. His candy factory was an old, rickety building, with panes of glass broken out of the windows, and in Summer he had the doors and windows open. The result was, that in the late Summer, when nectar was scarce, the bees would get into the building, and annoy his assistants, who killed a great many of the bees. One of the bee-keepers offered to make screens for the doors and windows, at his own expense, but the confectioner refused to accept the proposition, and kept up the quarrel until about two months ago, when his foreman, who is a member of the City Council, introduced an ordinance declaring certain things and acts nuisances. This ordinance contained a section, declaring bee-keeping within the city limits a nuisance, and imposing a penalty of $20 for a violation of its provisions.

This ordinance was referred to the law department. I at once called on the chairman of the committee, and asked to be heard when they took it into consideration. This request was granted, and I appeared before them. The committee consisted of two lawyers and three laymen, two of whom were, or had been, bee-keepers themselves. In addressing them, I, in substance, used the argument of Judge Williams in the Arkadelphia case, which you so kindly sent me, and wound up by showing them the absurdity of such an ordinance.

Our city at no place measures more than two miles across. I keep about 40 colonies in the city, within 1,000 yards of the line. I could easily remove them, and thus place myself beyond the reach of their ordinance. In addition to this, there are perhaps 150 colonies within one mile outside the line, all around the city. I explained to them that these bees would fly from one to three miles when nectar was scarce, and that no ordinance which they could enact would keep them out of the city at such times.

The lawyers saw the legal points raised at once, and the two bee-men actually arose and aided me in my argument as to the absurdity, and the result was an unanimous vote to strike out the section relative to bees, and it was so reported and passed at the meeting of the Council on Friday last.

C. G. BEITEL.

◆

Queen-Bees can now be admitted free of duty. The Manager of the Bee-Keepers' Union has a long letter from the Treasury Department, in reply to his letter of May 11, with the ruling of O. L. Spaulding, Esq., Assistant Secretary, that "Queen bees of recognized breeds may properly be admitted to free entry under the provisions of paragraph 482, without requiring the certificate of record and pedigree specified therein." *This is all we asked for.* The full correspondence may be given next week, so as to place it upon record, for the convenient reference of all interested.

◆

The Official Report of the 22nd Annual Convention of the New York State Bee-Keepers' Association is on our desk. The convention was held last January, and a condensed report published on pages 222, 284 and 326 of the AMERICAN BEE JOURNAL.

Bee-Keepers' Associations.

By request of W. I. Buchanan, Esq., Chief of the Department of Agriculture of the World's Columbian Exposition, we have prepared the following list of apicultural societies. There are 111, but these are not all, and there may be some errors. We, therefore, ask for immediate corrections from any persons who may discover them, so that we may have correct and full representation before the Directors of the World's Fair. Those who have had no experience in such work, will have but little idea of the labor involved in getting up this list.

North American Bee-Keepers' Association, P. H. Elwood, President. C. P. Dadant, Secretary, Hamilton, Ills.

Agency Bee-Keepers' Association, T. S. Smith, Secretary, Agency, Mo.

Alabama State Bee-Keepers' Association, J. M. Jenkins, Secretary, Wetumpka, Ala.

Bee and Poultry-Keepers' Association, Ora Knowlton, Sec'y, New Brunswick, Ind.

Boone and Hendricks Counties Bee-Keepers' Association, John Ridgway, Secretary, Brownsburg, Ind.

Brant Bee-Keepers' Association, D. Anguish, Secretary, Brantford, Ont.

Brookfield Bee-Keepers' Association, Jos. G. Banning, Secretary, Brookfield, Mo.

Bruce Bee Keepers' Association, A. Tolton, Secretary, ———, Ontario.

Capital Bee-Keepers' Association. C. E. Yocom, Secretary, Sherman, Ills.

Carolina Bee-Keepers' Association, N. P. Lyles, Secretary, Derita, N. C.

Cedar Valley Bee-Keepers' Association, J. J. Owens, Secretary, Waterloo, Iowa.

Central Iowa Bee-Keepers' Association, A. J. Adkinson, Secretary, Winterset, Iowa.

Central Michigan Bee-Keepers' Association, W. A. Barnes, Secretary, Lansing, Mich.

Champlain Valley Bee-Keepers' Association, R. H. Holmes, Secretary, Shoreham, Vt.

Colorado State Bee-Keepers' Association, E. Milleson, President, box 2522, Denver, Colo.

Cortland Union Bee-Keepers' Association, M. H. Fairbanks, Secretary, Homer, N.Y

Des Moines County Bee-Keepers' Association, John Nau, Secretary, Middletown, Iowa.

Darke County Union Bee-Keepers' Association, J. A. Roe, Secretary, Union City, Ind.

Eastern Indiana Bee-Keepers' Association, M. G. Reynolds, Secretary, Williamsburg, Ind.

Eastern Iowa Bee Keepers' Association, Frank Coverdale, Secretary, Welton, Iowa.

Eastern Iowa and Western Illinois Bee-Keepers' Association, H. S. Dibbern, Secretary, Milan, Ills.

Eastern New York Bee-Keepers' Association, W. S. Ward, Secretary, Fuller's Station, N. Y.

Erie County Bee-Keepers' Association, R. Meatyard, Secretary, Protection, N.Y.

Eureka Springs Bee-Keepers' Association, Dr. S. S. Purcell, Secretary, Eureka Springs, Ark.

Fremont Progressive Bee-Keepers' Association, G. E. Hilton, Sec'y, Fremont, Mich.

Haldimand Bee Keepers' Association, E. C. Campbell, Secretary, Cayuga, Ont.

Hamilton County Bee-Keepers' Association, Geo. C. Thompson, Secretary, Southport, Ind.

Hancock County Bee-Keepers' Association, S. H. Bolton, Secretary, Stanley, O.

Hardin County Bee-Keepers' Association, J. W. Buchanan, Secretary, Eldorado, Iowa.

Hill County Bee-Keepers' Association, H. A. Goodrich, Secretary, Massey, Tex.

Huron, Tuscola, and Sanilac Counties Bee-Keepers' Association, John G. Kundinger, Secretary, Kilmanagh, Mich.

Illinois State Bee-Keepers' Association, Jas. A. Stone, Secretary, Bradfordton, Ills.

Indiana State Bee-Keepers' Association, G. C. Thompson, Secretary, Southport, Ind.

Iowa State Bee-Keepers' Association, J. W. More, Secretary, Des Moines, Iowa.

Ionia Bee-Keepers' Association, Harmon Smith, Secretary, Ionia, Mich.

Johnson County Bee-Keepers' Association, L. R. Jackson, Sec'y, Urmeyville, Ind.

Kansas State Bee-Keepers' Association, J. B. Kline, Secretary, Topeka, Kans.

Kentucky State Bee-Keepers' Association, T. Connley, Secretary, Napoleon, Ky.

Keystone Bee-Keepers' Association, A. A. Davis, Secretary, Clark's Green, Pa.

Linwood Bee-Keepers' Association, B J. Thompson, Secretary, Waverly, Wis.

Mahoning Valley Bee-Keepers' Association, E. W. Turner, Sec'y, Newton Falls, O.

Manitoba Bee-Keepers' Association, J. Hammond, Secretary. Winnepeg, Manitoba.

Maine Bee-Keepers' Association, J. F. Fuller, Secretary, Oxford, Me.

Maine State Bee-Keepers' Association, Wm. Hoyt, Secretary, Ripley, Me.

Marion County Bee-Keepers' Association, Dr. H. J. Scoles, President, Knoxville, Iowa.

Marshall County Bee-Keepers' Association, J. W. Sanders, Sec'y, Le Grand, Iowa.

Maryland, Virginia and West Virginia Bee-Keepers' Association, D. A. Pike, President, Smithsburg, Md.

Michigan State Bee-Keepers' Association, G. E. Hilton, Secretary, Fremont, Mich.

Minnesota State Bee-Keepers' Association, C. Theilmann, Secretary, Theilmanton, Minn.

Missouri State Bee Keepers' Association, J. W. Rouse, Secretary, Mexico, Mo.

Nashau Bee-Keepers' Association, H. L. Rouse, Secretary, Ionia, Iowa.

Northeastern Kansas Bee-Keepers' Association, L. C. Clark, Sec'y, Hiawatha, Kans.

Nebraska State Bee-Keepers' Association, J. N. Heater, Secretary, Columbus, Nebr.

Nemaha County Bee-Keepers' Association, R. Corgell, Secretary, Brock, Nebr.

New York State Bee-Keepers' Association, Geo. H. Knickerbocker, Secretary, Pine Plains, N. Y.

Northeastern Bee-Keepers' Association, Geo. W. House, Secretary, Syracuse, N. Y.

New Jersey and Eastern Bee-Keepers' Association, W. B. Treadwell, Secretary, 16 Thomas St., New York City.

North Carolina State Bee-Keepers' Association, A. L. Beach, Sec'y, Pineville, N. C.

Northeastern Michigan Bee-Keepers' Association, W. Z. Hutchinson, Secretary, Flint, Mich.

Northeastern Ohio, Northwestern Pennsylvania and Western New York Bee-Keepers' Association, Geo. Spitler, Secretary, Mosiertown, Pa.

Northern Ohio Bee-Keepers' Asssociation, H. R. Boardman, Secretary, East Townsend, Ohio.

Northeastern Kentucky Bee-Keepers' Association, Alex. W. Stith, Secretary, Portland, Ky.

Northern Illinois Bee-Keepers' Association. Chas. Winn, Secretary, P. O. Box 1854, Rockford, Ills.

Northwestern Bee-Keepers' Society, at Chicago, W. Z. Hutchinson, Secretary, Flint, Mich.

Ohio State Bee-Keepers' Association, S. R. Morris, Secretary, Bloomingsburgh, O.

Ontario Bee-Keepers' Association, W. Couse, Secretary, Streetsville, Ont.

Pan-Handle Bee-Keepers' Association, W. L. Kinsey, Secretary, Blaine, O.

Progressive Bee-Keepers' Association, Miss Dema Bennett, Secretary, Bedford, O.

Rock River Bee-Keepers' Association, J. M. Burtch, Secretary, Morrison, Ills.

Northern Indiana and Southern Michigan Bee-Keepers' Association, F. L. Putt, Secretary, Goshen, Ind.

Northern Michigan Bee-Keepers' Association, F. A. Palmer, Secretary, McBride, Mich.

Northwestern Indiana Bee-Keepers' Association, A. Fahnestock, Secretary, La Porte, Ind.

Oneida County Bee-Keepers' Association, O. J. Evans, Secretary, Camroden, N. Y.

Patsalaga Bee-Keepers' Society, M. G. Rushton, Secretary, Raif Branch, Ala.

Portage County Bee-Keepers' Association, L. G. Reed, Secretary, Kent, O.

Progressive Bee-Keepers' Association, J. . Norton, Macomb, Ills.

Province of Quebec Bee-Keepers' Association, S. B. La Montague, Secretary, Montreal, Can.

Rhode Island Bee-Keepers' Society, G. A. Stockwell, Secretary, Providence, R. I.

Saint Joseph Inter-State Bee Keepers' Association, E. T. Abbott, Secretary, St. Joseph, Mo.

Seneca County Bee-Keepers' Association, I. Wilson, Secretary, Ovid, N. Y.

Southwestern Iowa Bee-Keepers' Association, E. Kretchmer, Red Oak, Iowa.

Southwestern Wisconsin Bee-Keepers' Association, Benj. Rice, Secretary. Boscobel, Wis.

Southern California Bee-Keepers' Association, C. N. Wilson, President, Los Angeles, Calif.

Southeastern Michigan Bee-Keepers' Association, A. M. Gander, Secretary, Adrian, Mich.

Southern Illinois Bee-Keepers' Association, F. H. Kennedy, Secretary, Du Quoin, Ills.

Southern Wisconsin Bee-Keepers' Association, J. T. Pomeroy, Secretary, Edgerton, Wis.

Southern Indiana Bee-Keepers' Association, C. Firth, Secretary, Madison, Ind.

Shenandoah Valley Bee-Keepers' Association, Joseph E. Shaver, Secretary, Friedens, Va.

Sheboygan County Bee-Keepers' Association, Mattie B. Thomas, Secretary, Sheboygan Falls, Wis.

Stark County Bee-Keepers' Association, Mark Thomson, Secretary, Canton, O.

Susquehanna County (Pa.) Bee-Keepers' Association, H. M. Seeley, Secretary, Harford, Pa.

Texas State Bee-Keepers' Association, A. H. Jones, Secretary, Golden, Tex.

Tri-State Bee-Keepers' Society, Dr. A. B. Mason, Secretary, Auburndale, O.

Tuscarawas County Bee-Keepers' Association, Geo. F. Williams, Secretary, New Philadelphia. O.

Turkey Hill, Bee-Keepers' Association, A. Fehr, Secretary, Belleville, Ills.

Union Bee-Keepers' Association, Daniel Shank, Secretary, Clayton, Ills

Union Bee-Keepers' Association, Mrs. J. E. Pryor, President, Dexter, Iowa.

Union Bee-Keepers' Society, G. W. Demaree, Secretary, Christiansburg, Ky.

Utah Bee-Keepers' Association, J. C. Swaner, Secretary, Salt Lake City, Utah.

Ventura County Bee-Keepers' Association, S. C. Gridley, Secretary, Nordhoff, Cal.

Vermont Bee-Keepers' Association, Miss Marcia Douglas, Secretary, Shoreham, Vt.

Wabash County Bee-Keepers' Association, Henry Cripe. Secretary, North Manchester, Ind.

Welland County Bee-Keepers' Association, J. F. Dunn, Secretary, Ridgeway, Ont.

Western Connecticut Bee-Keepers' Association, Mrs. W. E. Riley, Secretary, Waterbury, Conn.

Western Maine Bee-Keepers' Association, F. D. Wellcome, Secretary, Poland, Me.

Western Bee-Keepers' Association, P. Otto, Secretary, cor. Park and 25th Sts., Kansas City, Mo.

Whiteside County (Ills.) Bee-Keepers' Association, J. M. Burtch, Secretary, Morrison, Ills.

Wisconsin State Bee-Keepers' Association, Dr. J. W. Vance, Secretary, Madison, Wis.

Wisconsin Lake Shore Center Bee-Keepers' Association, F. Zastrow, Secretary, Kiel, Wis.

Williamette Valley Bee Keepers' Association, E. J. Hadley, Secretary, La Fayette, Oregon.

York and Cumberland Bee-Keepers' Association, C. W. Costellow, Secretary, Waterboro, Me.

☞ The list is much longer than we expected to find it, when the work of listing was commenced. It shows life and abiding interest.

Queries and Replies.

Bees Carrying Out Brood.

QUERY 772.—What is the cause of bees carrying out the brood, when they are almost fully developed?—Minn.

Scarcity of honey will do it.—H. D. CUTTING.

Usually, it is caused by starvation.—DADANT & SON.

Sometimes the cause of such is worms.—EUGENE SECOR.

Cold weather chills the brood so as to kill it.—A. J. COOK.

Generally, the larvæ of the wax moth.—G. M. DOOLITTLE.

Generally, scarcity of stores; sometimes worms.—C. C. MILLER.

I cannot state the cause, not knowing the surrounding conditions.—JOSEPH M. HAMBAUGH.

The bees may be starving, or the brood chilled to death, or injured by moth.—R. L. TAYLOR.

Usually want of stores; they will do the same also, when the brood is killed by cold.—J. E. POND.

A common cause is threatened starvation. Another frequent cause is the work of bee-moths.—M. MAHIN.

Moth worms usually. Sometimes from different causes, brood dies in the stage you mention.—JAMES HEDDON.

It may be scarcity of stores, or the brood dying from cold on account of insufficient bees to protect it.—C. H. DIBBERN.

Have had no experience of this kind, except in the case of drone-brood, so could not say. Bees carry out drone-brood in times of failure of nectar secretion in the flowers.—G. L. TINKER.

It is most frequently owing to a dearth of forage, but sometimes worms get under the brood, and the bees carry it out to get at the webs of the worms.—J. P. H. BROWN.

When I have seen brood thus carried out, and investigated, I found that the bees cut their comb to destroy a bee-moth grub. They also carry out drone-brood when there is a dearth of honey.—MRS. L. HARRISON.

Sometimes brood becomes chilled, but not killed outright, and when the young bees begin to hatch out, many of them are weak, deformed and worthless, in which case the workers ruthlessly cast them out. And sometimes bees at the point of starvation, will cast out their brood. I guess the "cause" is something like what I have mentioned above.—G. W. DEMAREE.

Either the lack of honey or the presence of moth-worms may be the cause.—THE EDITOR.

Queen-Excluders.—Mr. Thos. Foreacre, Marshallton, Del., asks:

I saw in the BEE JOURNAL that Ira Reeves had taken off 2 supers full of honey. I can beat that. I put on this Spring one simplicity hive having 64 sections. I opened it on Saturday, June 6, and found the sections all full except a few in the lower tier, in which the queen had laid some eggs. Should honey be removed from the hive as soon as it is capped, or should it be left in the hive until it is cooler? What is the cause of the queen laying in the surplus sections, when she has ten hanging frames full of good comb? A wood honey-board is on the hive in which the queen is laying in the surplus sections, but I prefer zinc honey-boards. We have had moisture enough here; the white clover looks well, and there is a plenty of it.

Dr. G. L. Tinker replies to the above as follows:

It is always best to remove the surplus comb-honey as soon as it is sealed. If left on the hives for a month, or more, the combs will be solid with propolis, or be so travel stained as to injure its sale.

The reason the queen lays in the surplus sections, on the 10-frame Langstroth hive, where excluder zinc is not used, is because it is not large enough for the average queen, where proper management is given, or the season proves to be unsually favorable for brood-rearing, as it has been this season so far. For the best results in producing comb-honey, I am fully convinced that the two-story hive, having a capacity equivalent to 13 Langstroth frames, is superior to every other, even in a poor season; while in a good season the results are surprising with these large hives.

Get a good hive and learn how to use the wood-zinc excluder, and you will soon get on the road to success.

Topics of Interest.

Method of Handling Queen-Cells.

C. A. BUNCH.

As the swarming season is now at hand, let us consider the proper way of handling our queen-cells for increase; also, how to have them built. We find instructions in the bee-books as to how the cells should be built, but they do not lay stress enough on the careful handling of them.

Suppose we have natural swarming, and about eight days after the colony casts a prime swarm, we proceed to cut out and remove all queen-cells but one. My experience has been that only a part of these cells will produce first-class queens, for the reason that the eggs in a part of the cells may not hatch until several days later, and the idea of having the young queens loosened and shaken down from the royal jelly, which is very easily done, and then be good, prolific queens, is very unreasonable, to me, at least.

I prefer to take each comb that has but one cell, and carefully carry it, bees and all, to the queenless hive, to have her hatch and be fertilized, and the combs that have more than one cell on are put in a hive, examined three times a day—morning, noon and night—and as soon as a queen is found hatched out she is picked off the comb and run in at the entrance of a queenless colony or nucleus. A full colony should be queenless three days; a two-frame nucleus about twelve hours.

I have used queen-cell protectors slipped over the cells and fastened at the top with one or two common brass pins, but this is not always a success, as the bees sometimes cut a bee-space around the cell-protector, which, of course, destroys the queen-cell.

Now, this may look like a lot of fooling, but such queens are valuable property if in a hive and given a fair chance. I have reared queens according to the plan laid down in the "Handy Book," and had nearly all the queens hatch in an hour, and several to hatch before I had time to cut the ripe cells off the comb. Of course, these cells were built in a queenless colony.

Many thanks to Dr. C. C. Miller for his way of having queen-cells built below a queen-excluder; it is an entire success with me. I go to a good, strong colony that has a breeding queen, take the comb, bees and queen out of the hive—that is one comb—remove all combs not occupied with brood, and proceed to fill the hive with other combs, bees and brood from other hives of good stock, being careful not to bring the queen along.

Now, place a queen-excluder above these combs, another hive on the queen-excluding honey-board, and put the queen and comb in the upper story, filling out with other brood-combs (empty combs will do). In about eleven days I lift off the upper story and honey-board, and carefully remove the combs that have queen-cells on, place in comb bucket and carry to queenless hives where wanted.

I find such colonies work well, and we can use this hive again for queen-rearing, as many bees will return from combs taken away, but I would gather up combs, bees and brood as before, and place them under the queen-excluder. By this plan the bees are not strictly queenless, and have to pass down through by the cells when going from the queen to the field. I like the last named way of having cells built, as the bees are not entirely queenless, and we are likely to have a fine cell built on each comb just as I like to have them.

As I stated in a report last Fall, my crop of honey was less than 4 pounds per colony, Spring count, so I was obliged to feed the bees last Fall and this Spring, altogether 280 pounds of granulated sugar. A few colonies—about 4—starved, and about the same number died with diarrhea, as the combs were well loaded with pollen, and about 20 Spring dwindled. Altogether 28 out of 50 colonies perished.

Nye, Ind.

Apicultural Notes from Nebraska.

J. M. YOUNG.

Every bee-keeper should have a lawn mower to keep down the grass and weeds around the hives.

"Aint they pretty," remarked a friend the other day, while viewing my new dovetailed hives. I have them painted red to make a contrast among my white ones.

White clover is in full bloom now, and furnishes a nice lot of honey for brood-rearing, and just when we need it to rear lots of bees for the basswood honey harvest. I expect the basswood to bloom this year before July 1; usually it blooms, in this locality, from March 1 to 15.

It hardly pays to fuss with little weak colonies at this time of the year, and usually I dump a swarm right on these little colonies, as I like a hive full of bees for business. A swarm put in in this manner will go right to work in boxes, and is more profitable than anywhere else, to the bee-keeper.

A few swarms issued during May, just as we expected, and quite a number since, but to-day the weather is quite cool and cloudy,. and has been for a week, which has checked swarming considerably. One swarm that came off a week ago has about half filled their hive already with new comb, just from strips of foundation an inch wide in the frames.

In reply to friend Stilson, in the May number of the Nebraska *Bee-Keeper*, and "Buckskin Charley" in the June number, I will say that I do not wish to enter into a controversy with these gentlemen in regard to there being no basswood in Nebraska, but will say this much at least, that I seldom say, or allow anything to appear in print over my signature, that I cannot back up or verify.

Again, I am not going to attempt to prove this matter in this article from the fact that it is not necessary, but will simply state further, that I have been a bee-keeper for 20 years or more, and have made a business of producing honey, too. During this time I have obtained nearly all of my surplus honey from the basswood. A few years ago, I took from one colony 350 pounds of honey, and a large portion of it was from this same basswood.

In speaking about there being basswood in Nebraska, I had reference to the eastern part of the State, and not to the western sand-hills, where there are miles and miles of broad prairie where even so much as a riding switch cannot be cut.

I came to this State in 1855; have lived here ever since, and have been over the State considerable, and wherever I found forest a little basswood was to be found; even on the Niobrara River—not Niabrara—some can be seen growing. It will, perhaps, surprise these gentlemen more for me to state that there is plenty of saw-log basswood timber in this locality, and it is a fact that plenty of it can be found all along the Missouri River for several miles above and below here.

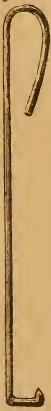
Plattsmouth, Nebr., June 8, 1891.

Taking Sections Out of a T Super.

DR. C. C. MILLER.

I will now describe the plan I have followed for some time, to take single sections out of a T super, without taking the super off the hive. I thought of doing so sometime ago, but had about given it up, with the thought that, if followers and wedges in T supers came into general use, there would be no special plan needed. Still, it may be useful to a good many.

You may remember, friend Root, a tool that I took to the convention at Madison, a year ago, and then forgot to show. Well, I send it herewith. I have pulled sections by the thousand with the identical one I send you. I will tell you how to make one. Have your tinner cut a piece of No. 11 wire about a foot long. Straighten it. Bend the wire at right angles about 1 inch from one end. Make another right-angled bend, ¼ of an inch or less, from the same end. (I am not sure which of these bends should be made first). The end of your wire is now shaped like the bottom part of a capital L (see illustration). But the end is blunt, and must be filed down to a cutting edge like a chisel. Your chisel-edge will, of course, be the size of the thickness of your wire—a little more than ⅛ of an inch.



Now, for a handle. Make a curved bend at the other end of the wire, about 3 inches from the end, so that it shall form a semi-circle at the end, an inch in diameter. This leaves about 2 inches of the end straight, and I do not know whether it is better to have this 2 inches parallel with the main wire, or to have the end come within ⅝ of the main wire. The bends at both ends are all made in the same plane, so that the hook will lie flat upon a table, without any part projecting upward.

Another tool is needed. Take a common steel table-knife, and make it square across the end by cutting off the rounding part. Make this square end about as sharp as the cutting edge of a table-knife usually is.

Now, we will go to the hive, and I will show you how to pull out any desired section. Take off the cover and give the bees just enough smoke to drive them out of the way a little. There are separators in the super, and on top little separators ¼x⅛ inch, 12 inches long, to keep the ends of the sections apart. Now, run the knife across at each end of the section, to loosen the little separator from it. I must confess that I usually use a third tool for this, the big blade of a pocket-knife. Run in the case-knife at each side to the bottom of the section, so as to loosen the section from the separators. Put your hook down between the section and separator, and give it a quarter turn, so as to let the hook on the lower end run under the section.

I have a bit of string tied on the wire, to show me when it is pushed just deep enough to turn the hook. If the hook is not in deep enough when turned, of course it will dig into the honey. A ring of bright paint might be better than the string, for it would never slip out of its place. I think you will understand the rest. Like a bureau drawer, it may pull out straight; but very likely it will need starting at each end. When you get the section out, just grasp across it with the tumb and fingers of one hand, and give it a few rapid whirls, and every bee will be thrown off.

Now, that looks like a good deal of fuss to read it, but it does not take as much time as you probably imagine. I think I can take out a single section, or several sections, from a T super in less time—a great deal less time—than out of a wide frame. You see, there is no frame to take out—nothing but the section. In fact, if you loosen the super you will find it much harder to pull the section. Sometimes I have taken out the sections without the hook, merely loosening them with the knife and then pulling them with the fingers; but every now and then the bottom-bar of a section would pull off, and I was glad to go back to the hook.

The objection made by the editor, in the foot-note, is a valid one, that sections left on the hive for a long time will have a soiled, travel-stained, yellow appearance. But they should never be left on after the harvest is over; and in a poor season, when nothing is put in them, I think they come off about as bright as if they had been in a wide frame. You know, the bees do not go into the glue business (at least they do not here) until the white honey season is over. Indeed, if you take into consideration the whole surface of a section, or, in other words, its total appearance as viewed by a purchaser, the section out of a T super is the cleaner. In the wide frame, a heavy streak of propolis is crowded in just as far as the bees can push it all around the section. This they have no temptation to do in the T super, for there is no crack.

You say, friend Root, that an enameled cloth can be laid flat on the section tops in wide frames and section holders. I do not see what good it would do in wide frames, for it would cover only the top-bars, and I am sure it could be put on a T super just as well as on section-holders. But do you not know that it would make matters a good deal worse in either case? If you want to see the tops of sections thoroughly daubed with glue, just lay an enameled cloth flat on the sections, toward the end of the harvest. The bees are busy trying to fill up cracks; and as fast as they push in propolis under the cloth, the cloth is raised up, making more space to fill; and if glue is to be found at all, you will find it there in plenty.—*Gleanings.*

Marengo, Ills.

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Premiums at the Nebraska State Fair.

E. WHITCOMB, SUPT.

RULE 19.—When there is but one exhibitor competing for a premium, the committee may award no premium, or second or first, as merit may warrant. But in no case shall the money award exceed half that stipulated in case of competition. In non-competitive awards, committee must state in writing to the Board, in detail, the reasons for awards. All non-competitive awards are subject to revision and change by the Board of Managers, or the State Board, when in session; *provided*, the Board of Managers, or the State Board, shall have power, in extraordinary cases, with evidence justifying, to award a full cash premium.

POINTS FOR THE JUDGMENT OF HONEY.—COMB HONEY: 1st. Perfection of capping. 2d. Evenness of surface. 3d. Whiteness of capping. 4th. General appearance as to marketableness.

EXTRACTED HONEY: 1st. Cleanliness. 2d. Clearness. 3d. Flavor.

Best comb basswood or white clover honey, not less than 20 pounds, crated, and in single comb sections, weighing not more than 2 pounds each—$10, $5.

Best comb Fall honey, not less than 20 pounds, crated, and in single comb sections, weighing not more than 2 pounds each—$10, $5.

Best gallon extracted white clover or basswood honey—$5, $3.

Best gallon extracted Fall honey—$5, $3.

The above is limited to competitors producing their own honey in Nebraska during the year 1891.

Best 20 pounds granulated honey—$5, $3.

Best and largest display of any one, including bees, extracted and comb-honey and apiarian supplies—$15, $10.

Best exhibit of brood-chamber and surplus comb-foundation, full to partly drawn—$10, $5.

Best exhibit of apiarian supplies and implements—$15, $10.

Best display of honey in marketable shape—$10, $5.

Best display of honey candy, honey sugar and sweets by any one, in which honey is made to fill the place of sugar —$5, $3.

Best honey vinegar, not less than one-half gallon—$3, $2.

Best display of bees and queens in observatory hives, and not allowed to fly—$10, $5.

Best exhibition of extracted-honey, to be exhibited on the grounds under the direction of the Superintendent, not later than Thursday of the fair—$10, $5.

Best honey extractor, test to be made by actual extracting upon the grounds—$5, $3.

Best all-purpose single-walled hive—$2, $1.

Best all-purpose chaff hive—$2, $1.

Best bee smoker—$1, 50 cents.

The following is confined to exhibitors in Nebraska alone:

Best display of apiarian implements and supplies, including comb-foundation, same full to partly drawn, and queens and bees in cages—$10, $5.

Best report of surplus honey stored by any colony of bees during the year 1891, the amount of stores, manner of building up, handling, kind of hive used, and kind and quality stored, to be verified by owner, entries to conform with other entries of this class, and report, with verification, to be filled with Superintendent not later than noon on Thursday of the fair—$15, $10, $5.

Discretionary.—This lot is intended for any and all articles which may have been omitted in any of the foregoing lots in this class, and might properly have been included therein.

Friend, Nebr.

Management of Out-Apiaries.

MRS. L. C. AXTELL.

I do not think it advisable to start an out-apiary unless the apiarist has strength and time to have personal supervision over it, as it seems so difficult to hire permanent help willing and competent to care for bees. As soon as they get a liking for the business they want to go into it themselves, and we cannot blame them for that, and if they do not like it, they do not take enough interest in it to do the work right.

I would sooner leave the bees to care for themselves than to send one who knows little or nothing of bees to care for them, or what is worse, one who thinks he knows it all and really knows nothing as he ought; or thinks he knows so much that he is not willing to follow our directions.

Some people can push work, and can make it pay to run several or many hands, while others cannot. The apiarist should study his own ability in that respect. If I did not wish to keep more than 100 colonies, or about that number, I would prefer keeping them all at home, wintering back and selling off so as not to have more than the 100 colonies at the beginning of the honey harvest each year.

We have never seen a year since we began keeping bees, 20 years ago, but that we got more honey per colony than any of our box-hive neighbors who kept from one to 10 colonies, while we had from 100 to 300 colonies in apiaries, so that in good years there must be an immense amount of honey secreted. But in quite poor years I do not think they do get quite so much per colony as if there were less in our apiary, though of that I am not quite certain.

We prefer to have our bees at our out-apiary in chaff-packed hives, protected by a high board fence on three sides, and leave them at the out-apiary all Winter, rather than to bring them home, for several reasons. We think it less work; it relieves us of the danger of moving bees, and we have as many at home as we care to put into our cellar.

Our bees away from home make us much more work per colony than those at home; one can hardly realize how much more until they try it.

Our out-apiary is 4¼ miles away from home, making 51 miles per week travel back and forth. Counting the time it takes to gather up the things ready to go, getting up the team and carriage, putting team and things away when we get home, etc., it consumes the greater part of two days a week more than if the work and time had been expended upon our home apiary. Taking one year with another, we get just as much honey from one apiary as the other. One is near the timber, and the home apiary is on well-cultivated prairie land. —*Farmers' Review.*

Iowa State Bee-Keepers' Society.

EUGENE SECOR, PREST.

This society will meet in annual convention in its tent on the Fair Ground, at Des Moines, Tuesday and Wednesday, Sept. 1 and 2, 1891. I would like to see every bee-keeper in Iowa who takes pride in his State make arrangements to attend that meeting. Get ready to take something to the fair also.

I am assured by the managers of the Agricultural Society that the bee-keepers shall have more room for exhibits. They are beginning to realize that Iowa can make too fine a bee and honey show to longer be sandwiched between the pumpkins and cabbages. They offer to put up a separate room for us if we will fill it. Let us show them that we appreciate their efforts to give us additional room, by the extent and magnificence of the display.

We expect to have the best State convention ever held in Iowa. We want to get acquainted with everyone interested in bee-keeping. At that meeting, besides an interesting programme, which will be published later, there will be other important questions pertaining to the pursuit, to talk about. The grandest World's Fair ever held on this continent, will open in 1893. It is none too early to begin talking it over if we wish our State to stand in the front rank. Other societies are moving. Shall the State Bee-Keepers' Society go with them ?

We have decided to hold this meeting in connection with the fair because the railroads always give half rates, and we have an opportunity to see one of the best agricultural exhibitions in the West. The world does not know what Iowa is capable of doing in the way of honey production, because we have made no organized effort to enlighten them.

The first thing to do is to build up a strong State society, that can get recognition at the hands of "the powers that be," if occasion arises when we need it.

Let us take an interest in the development of that industry which adds to the Nation's wealth while it impoverishes no one; which fascinates every intelligent person who pursues it; which furnishes a pure, natural, healthful sweet, acceptable alike to rich and poor, and which, as a rural pursuit, is adapted to old and young, ladies and gentlemen. It cultivates observation and study, and gives added interest to the farm.

Forest City, Iowa.

That Foul-Brood Bill.

W. P. FAYLOR.

Two bills were contemplated on the subject of "foul-brood" in the Illinois Legislature. The first one was withdrawn, or never presented at all. The one finally introduced in the House is familiar to all.

On page 474 of the BEE JOURNAL, the following is given: "Representative Smith will soon introduce a bill into the Legislature providing for an Inspector of foul-brood, and for payment of his salary by a tax of 2 cents on each colony of bees in the State."

The bill as finally presented increases the tax from 2 cents to 5 cents a colony, irrespective of value or race of bees. To my mind, it would be just as sensible to tax every horse, pig or cow, the same all over the State. Mr. A. I. Root values one of his colonies of bees in April, with best imported queen, at $26.

Now, I ask, where would there be justice in taxing a colony of bees in a box-hive, worth $3, the same as one worth ten times as much ? Of course, it would matter but little whether the tax went direct to the Inspector, or through the Legislature to him; nor would it make any difference whether he saw my bees or not; for it would be still more of an intrusion to pay an Inspector for doing nothing.

Mr. Smith's bill says the revenue is to be applied: "For the suppression of foul-brood and the promotion of the bee-keeping industry." But who is to handle all this money ? The "Illinois Bee-Keepers' Association," according to the provisions of this bill; but everybody knows that not more than one bee-keeper out of a hundred in the State belongs to that organization. Would it be right to tax 99 men to give one out of the hundred the privilege of experimenting with the proceeds of all? Why not have an Inspector to see that bees do not starve for want of food, when it is well understood that a thousand colonies of bees die of starvation to one of foul-brood? Would this not be as reasonable?

I would be obliged if some one would tell us how many colonies of bees have perished in the State of Illinois from foul-brood during the last year. Did any one ever see a colony of bees in a box-hive infected with this so-called "dreaded disease?"

I only give some of my objections to one section of this bill. Had I a colony of bees diseased with foul-brood, I would dip the combs (hive and all, if necessary) in strong salt brine, and that would end the matter.

State Line is partly in Indiana and partly in Illinois, but the postoffice is on the Indiana side of the line. From the tone of the editor's note to my last article on this subject, I judged that he was riled; but I hope I was mistaken in this.

I, for one, am in for reducing the taxes in America instead of burdening the people with more. If the Illinois Bee-Keepers' Association wishes to impose a tax upon itself, I am willing it should do so; but to ask other people to carry forward the work of that society, I regard as being down-right cheeky.

State Line, Ind.

[To attempt by law to eradicate foul-brood in bees, as is done with pleuro-pneumonia in cattle, is a praise-worthy act. It entails labor on the officers of the Bee-Keepers' Association, for which they get no pay. The insinuation of Mr. Faylor is exceedingly ungenerous about "experimenting" at the expense of 99 for the benefit of 1 out of the 100!

For bees to have a contagious disease is very different to simply letting them starve—the former is a menace to the neighborhood, the latter is simply a loss to the negligent owner.

Public interest does not center in a comparison of the number of colonies having died of starvation and of foul-brood! The just complaint is that a sufficient quantity of diseased colonies have *not* died, and the law contemplates their death to save the remainder, and stamp out the disease!

No, Brother Faylor, the editor was not "riled." He only desired to defend the Illinois association from an unreasonable and unjust attack.—Ed.]

Bees Swarming on Sundays.

MRS. L. HARRISON,

It always appears to me that bees swarm more on Sundays than on other days, but it may be only owing to the fact that we notice it more. This morning at a little past five, a neighbor called, saying, "There is big bunch of bees on a stake in the lower part of your vineyard, and they were there yesterday; I thought I would come and tell you before they left."

If it had not been for the kindness of this neighbor, we might not have seen them, and, when they again took wing, no power on earth could stop them.

There they were in a compact cluster, the outside ones overlapping each other like shingles upon a roof. A hive was brought out of the cellar, full of combs, where they had been put, to preserve them from the ravages of the bee-moth. The hive was placed near the post with a smooth board in front of it, and the bees were dipped from the cluster with a dipper and placed before it.

After passing a night upon a post, they were glad of a shelter, and marched into it "double quick." Before the early morning scouts had returned, the hive was carried to a permanent stand. Therefore, the first swarm of the season of 1891, in our apiary, issued on May 24.

This incident shows that it is well for bee-keepers who have near neighbors to be on good terms with them. Lately, in the city of Canton, Ills., a bee-keeper has been arrested and fined one dollar and cost of prosecution, and ordered to remove his bees. The case has been appealed to the Circuit Court.

This apiarist is an active prohibitionist, and the opposition concluded that if they could not sell their liquors he should not keep bees. O, join the Union, the Union, all ye bee-keepers! and then if your neighbors have any spite against you, you can call to your assistance an army, good and strong, well equipped with ammunition, in the way of prior suits, decisions of the Supreme Court, etc., and a band of bee-keeping lawyers.—*Prairie Farmer.*

Wavelets of News.

Larval Food.

I am glad to hear Mr. Cowan's book praised. It is excellent. He gives the history of most of our discoveries, and withholds no credit. He does not say that the upper head glands secrete the larval food, but, as I showed by actual experiment a year ago, the larval food is really chyle, or a product of true digestion in the true stomach. I fed bees syrup with pulverized charcoal in it, and found the latter in the royal jelly. This could not occur if royal jelly were a secretion.—A. J. Cook, in *Gleanings*.

Honey as a Tape-Worm Remedy.

The most successful pumpkin-seed remedy is made as follows:

Peeled pumpkin-seeds.....	3	ounces.
Honey.....................	2	"
Water.....................	8	"

Make an emulsion. Take half, fasting, in the morning, remaining half an hour later. In three hours' time two ounces castor oil should be administered. Used with great success.—*Medical Brief*.

Aroma and Color of Honey.

By the color of the honey and the aroma therefrom, an experienced bee-keeper can determine the source from whence it came. Thus, it is very easy to tell buckwheat honey by its very dark look, and by its strong and pungent odor.

Honey-dew has the same dark look, but lacks the odor or aroma. In fact, there is little or no aroma about honey-dew. For this reason no bee-keeper need be deceived as to the source of such odorless honey.

Aroma is a term employed to designate those substances, the extreme minute particles of which are supposed to affect the organs of smell so as to produce peculiar odors. The particles diffused through the atmosphere and affecting the olfactory nerves—if the theory of particles of matter be correct—must indeed be extremely minute, yet not so much so, but what we easily detect the smell from a field of any honey-bearing plant or flower. These odors have generally been supposed to depend upon essential oils.—G. M. Doolittle, in the *Rural Home*.

Honey Vinegar.

One pound of honey and one gallon of water are the proper proportions to make a good vinegar. That is, 29 pounds of honey will make (water enough being added to fill a regular 32 gallon barrel) one barrel of the best vinegar.

The vessels used to make it in are common alcohol barrels, which are found at drug stores. Saw out one of the barrel heads, and paint the outside to prevent the iron hoops from being destroyed by the vinegar. The barrels and vinegar are kept in the cellar, so covered with burlap as to keep the dust out and let the air in.

One year converts this water and honey into the choicest vinegar. More age will make it sharper, or more acid, but at one year old it is fine enough for any use. Sweetened water from washing honey drippings is the most common waste of the apiary, and to utilize it, is presumed to be the desirable matter in connection with honey vinegar. With the low price of honey, bee-keepers may find a reasonable outlet for some of their poor honey, such as is unfit to sell as an article of delicate luxury for table.—*Nebraska Agriculturist*.

Carefully Bred Bees.

There is a great difference between the worth of bees that have been bred up for many years by a skilled apiarist and those that are in box-hives, that have never given any surplus. I should prefer the former at a good price instead of the latter as a gift.

The Italian bees are superior to the blacks in every way, unless it is in capping the honey to show white. I sometimes think this is caused by their working on the alsike and other plants that the native bees are unable to obtain honey from on account of their inability to reach it. Probably the honey gathered from the same flowers by each race would show the same. They are never idle.

I have observed them when taking flights in mid-Winter busily engaged in house cleaning when colonies of natives close by the side of them were only enjoying themselves on the wing. Their marked superiority is more noticeable during poor seasons. Some think the progeny of cross-bred queens equal to full blood Italians. I prefer the pure Italians in every respect, as they cross-breed soon enough with neighbors' bees. —J. H. A., in *Stockman*.

CONVENTION DIRECTORY.

Time and place of meeting.

1891.
Aug. 6.—Rock River, at Sterling, Ills.
J. M. Burtch, Sec., Morrison, Ills.

Sept. 3.—Susquehanna County, at So. Montrose, Pa.
H. M. Seeley, Sec., Harford, Pa.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—The Editor.

North American Bee-Keepers' Association

President—P. H. Elwood....Starkville, N. Y.
Secretary—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

President—James Heddon ..Dowagiac, Mich.
Sec'y and Manager—T. G. Newman, Chicago.

Bee and Honey Gossip.

☞ Do not write anything for publication on the same sheet of paper with business matters, unless it can be torn apart without interfering with either part of the letter.

Perfect Honey Season.

My bees are doing a "big business" this year. I never saw as perfect a season so far. I do not think that they have lost a week altogether this Spring. I have some honey now ready to take off the hives—two weeks earlier than usual.

F. E. Burrows.
Delavan, Wis., June 15, 1891.

Bee-Escapes.

Remove the supers as near dark as you can. Put them on a board (the hive cover will do) connecting with the alighting-board, handling them as gently as you can, and then watch the procession. I think you will see as fine a "bee-escape" as you could wish.

Ionia, Mich. Harmon Smith.

West Tennessee for Bees.

In the Spring of 1890 I landed here, with 2 colonies of bees, from Indiana. They came through in good condition, and went to work vigorously. They cast 2 large swarms in May, and supplied us with 40 pounds of honey. All of them wintered nicely, and carried in natural pollen throughout December, January and February, and on April 17 the first swarm issued. Since that time all have cast large swarms, one leaving for the woods. I prevent second swarms, and have had an abundant supply of good honey for a month past. I now have 7 colonies working in 240 sections for surplus. There is a continued source of honey here from the opening of the maple and elm until frost nips buckwheat and stock peas. From my short experience, and from what I have learned from others, I believe West Tennessee is an excellent locality for bees and honey.

N. W. Wright.
McKenzie, Tenn.

Horsemint Honey.

Bees are booming in this vicinity. Youpon and ratton gave us a good yield through April and May. I had about 100 swarms. Twelve prime swarms issued at one time and clustered together, but I separated them, and put them into three 2-story Langstroth hives. They present a grand sight in the morning, when they start for the forest. This is a fine country, and bees can gather honey here from 8 to 10 months of the year. Horsemint is beginning to yield nectar, and I anticipate a fine crop, as the hives are overflowing with workers. We are having a fine rain to-day, which was very badly needed.

Willie Douglass.
Lexington, Tex., June 6, 1891.

Lots of Honey.

I am extracting from 40 colonies, and want to introduce new queens. I never saw bees build up so fast as mine have this Spring. Lots of honey is being gathered.

Geo. S. Long.
Big Rock, Ills., June 17, 1891.

Bees Working on Red Clover.

Bees could not work much this Spring, on account of the dry weather, there having been no rain from April 22 until June 4, in consequence of which the white clover suffered, as it did last year. Bees were busy in the red clover last week. It was quite cold on June 4 and 5, and yesterday and to-day we were compelled to build fires. There have been no swarms in this locality to my knowledge.

J. Nydegger.
Farmer City, Ills., June 7, 1891.

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☞ The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to pay for another year.

☞ Systematic work in the Apiary will pay. Use the Apiary Register. It costs:

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 25
" 200 colonies (420 pages)	1 50

☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

When Writing a letter be sure to sign it. Too often we get a letter with the name of the post-office, but no County or State. One such came recently, and we looked into the Postal Guide and found there were places by that name in 13 States. That order for goods will have to wait until another letter comes to give the proper address. Be sure to stamp your letter, or it may go to the dead letter office.

The Nebraska State Fair will be held at Lincoln from Sept. 4 to 11, 1891. Mr. E. Whitcomb, of Friend, Neb., is the Superintendent. Apiarian premiums amount to $237.50.

The Honey-Bee: Its Natural History, Anatomy, and Physiology. By T. W. Cowan, editor of the *British Bee Journal*, illustrated with 72 figures and 136 illustrations. $1.00. For sale at this office.

A Hummer—that is what *Field and Farm* calls the AMERICAN BEE JOURNAL.

Have your honey extractor, pails, cans and kegs ready for the honey flow?

We Club the American Bee Journal and the Illustrated Home Journal, one year for $1.35. Both of these and Gleanings in Bee Culture, for one year, for $2.15.

☞ The sewing machine I got of you still gives excellent satisfaction—W. J. PATTERSON, Sullivan, Ills.

Convention Notices.

☞ The Rock River Bee-Keepers' Association will meet at Sterling, Ills., on Thursday, Aug. 6, 1891.
J. M. BURTCH, Sec., Morrison, Ills.

☞ The ninth annual meeting of the Susquehanna County, Bee-Keepers' Association will be held on Thursday, Sept. 3, at South Montrose, Pa.
H. M. SEELEY, Sec., Harford, Pa.

If you have a desire to know how to have Queens fertilized in upper stories, while the old Queen is still laying below—how you may *safely introduce* any Queen, at any time of the year when bees can fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact, everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and is as interesting as a story. Price, $1.00. For sale at this office.

Supply Dealers should write to us for wholesale terms and cut for Hastings' Perfection Feeders.

Red Labels are quite attractive for Pails which hold from 1 to 10 lbs. of honey. Price, $1.00 per hundred, with name and address printed. Sample free.

A Nice Pocket Dictionary will be given as a premium for only **one new** subscriber to this JOURNAL, with $1.00. It is a splendid little Dictionary—just right for the pocket. Price, **25 cents.**

Please send us the names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you.

Binders made especially for the BEE JOURNAL for 1891 are now ready for delivery, at 50 cents each, including postage. Be sure to use a Binder to keep your numbers of 1890 for reference. Binders for 1890 only cost 60 cents, and it will pay you to use them, if you do not get the volumes otherwise bound.

When talking about Bees to your friend or neighbor, you will oblige us by commending the BEE JOURNAL to him, and taking his subscription to send with your renewal. For this work we will present you with a copy of the Convention Hand-Book, by mail, postpaid. It sells at 50 cents.

It is a Prize in Itself.—I have just seen the ILLUSTRATED HOME JOURNAL for June, with the Rebus and offer of prizes for its solution. As the paper, at 50 cents a year, is a prize in itself for the amount, I take pleasure in enclosing it, and if my answer to the Rebus is correct, you can place me as a contestant for the prize. H. E. LAING.
Chicago, Ills.

☞ The Union or Family Scale has been received, and I am much pleased with it. W. H. KIMBALL.
Davenport, Iowa.

Supply Dealers desiring to sell our book, "Bees and Honey," should write for terms.

We send both the Home Journal and Bee Journal for one year, for $1.35.

Very Well Pleased. — The Sewing Machine and Scales are received in good order, and I am well pleased with them. They do good work. The sewing machine is ornamental as well as useful. The scales are very handy for family use.—G. RUFF, Burlington, Iowa.

Bee-Keeping for Profit, by Dr. G. L. Tinker, is a new 50-page pamphlet, which details fully the author's new system of bee-management in producing comb and extracted-honey, and the construction of the hive best adapted to it—his "Nonpareil." The book can be had at this office for 25c.

Calvert's No. 1 Phenol, mentioned in Cheshire's Pamphlet on pages 16 and 17, as a cure for foul-brood, can be procured at this office at 25 cents per ounce, by express.

HONEY AND BEESWAX MARKET.

NEW YORK, June 19.—New crop of Southern honey is now arriving freely. We quote: Extracted, 75@80c; orange blossom, 7@7½c; California, 7@7½c. Beeswax scarce at 28@30c.
HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

KANSAS CITY, June 20.—Very little choice white 1-lb. comb-honey on the market. Comb, 1-lb., 14@15c; 2-lb., 10@12c. Extracted, 6@6½c. Beeswax, 25c.
CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CINCINNATI, June 20.—Trade good in extracted-honey, with plenty of the new crop in market. New comb-honey is plentiful. We quote: Choice comb, 12@14c. Extracted, 6@8c. Beeswax is in good supply and fair demand at 25@28c for good to choice yellow.
C. F. MUTH & SON,
Corner Freeman & Central Aves.

CHICAGO, June 20.—Demand for comb and extracted honey not very active. We quote: Comb, 12@17c; extracted, 7@8c. Beeswax, 30c.
S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, June 20.—The demand for honey is very light; supply fair, at 12@14c; extracted, 5@7c. The demand for beeswax is good, at 25@27c; supply light.
HAMBLIN & BEARSS, 514 Walnut St.

CHICAGO, June 20.—Not any desirable comb-honey in market. A good article would sell readily at 17c. Extracted is steady at 7@8c for best quality. Beeswax, 28c.
R. A. BURNETT, 161 S. Water St.

BOSTON, June 19.—No change in prices of honey; sales a little slow, on account of extremely low price of maple sugar. White, 1-lb. comb, 18@19c; fair to good, 14@18c; 2-lb. sections, 16@17c. Extracted, selling at 7½@8½c. No beeswax on hand.
BLAKE & RIPLEY, 57 Chatham St.

ALBANY, N. Y., June 19.—Honey market is slow, with little call for comb-honey, as the weather is hot. Extracted, quiet and steady, at 5@8c. Beeswax, in demand at 28c.
H. R. WRIGHT, 326-328 Broadway.

NEW YORK, June 19.—No comb-honey in the market. Extracted—demand light, except for Southern, which would sell easily at 75@80c per gallon for common, and 7½@8c for Florida. Beeswax scarce and firm at 29c.
F. G. STROHMEYER & CO., 122 Water St.

MILWAUKEE, June 20.—Supply of choice comb-honey is very small, and shipments will find a good market. We quote: Choice, 1-lb. sections, 18@20c; common, 10@16c. Extracted, white, in barrels and kegs, 7½@8½c; in tin, 8½@9c. Dark or amber, 6@7c. Beeswax, 26@30c. A. V. BISHOP, 142 W. Water St.

SAN FRANCISCO, June 17.—Market almost bare of honey. We quote: Extracted, 5½@6¼c. Comb-honey, not enough in market to be quotable. Beeswax scarce; demand fair, at 26@27c.
SCHACHT, LEMCKE & STEINER,
16-18 Drum St.

CHICAGO, June 20.—No choice comb-honey in market. Fancy stock would bring a good price. Beeswax scarce, at 29@30c.
J. A. LAMON, 44-46 S. Water St.

DETROIT, June 20.—No comb-honey in the market. Extracted, 8@9c. Beeswax firm, at 29@30c. M. H. HUNT, Bell Branch, Mich.

Advertisements.

CARNIOLAN!

THE finest bee in the land. All Queens reared from first grade imported mothers, and are warranted purely mated; 75 cents each; six for $4.00. Tested, $1.50 each; six for $7.50. Descriptive circular free. Address
A. L. LINDLEY,
26A1t JORDAN, INDIANA.
WHEN ANSWERING THIS ADVERTISEMENT, MENTION THIS JOURNAL.

SECTIONS We have about 20,000 No. 1, 1-pound Sections, which we will close out at $3.00 per thousand. Other Supplies cheap. Address
J. W. Buchanan & Bro., Eldora, Iowa.
26A2t
WHEN ANSWERING THIS ADVERTISEMENT, MENTION THIS JOURNAL.

Bee-Keepers' Supplies.

Send for illustrated price-list, free. My pamphlet, "How I Produce Comb Honey," by mail, 5 cents. GEO. E. HILTON, Fremont, Mich.
26A4t
WHEN ANSWERING THIS ADVERTISEMENT, MENTION THIS JOURNAL.

Lots of Replies.

During the year 1888, we had an advertisement running in the American Bee Journal, and we had the same in several Daily and Weekly papers, but to our surprise we received more than double the number of responses from the advertisement in the American Bee Journal, than from all our others combined.

The fact that we are still receiving letters referring to our advertisement in the Bee Journal, shows that it is preserved and read long after it is received. Newspapers are read and thrown aside and that ends it, but the Bee Journal is preserved, and the advertisements are often noticed and bring responses long after they appeared in it.

We regard the American Bee Journal as a first-class advertising medium.

Cedar Rapids High-Speed Engine Co.,
HENRY RICKEL, *President.*

Wants or Exchanges.

Under this heading, Notices of 5 lines, or less, will be inserted at **10 cents per line,** for each insertion, when specially ordered into this Department. If over 5 lines, the additional lines will cost 20 cents each.

WANTED—To sell my apiary of 100 colonies of Italian bees, with fixtures, honey-crop, supplies and everything; in a never-failing locality; at a bargain if bought soon. Address LOUIS WERNER, Edwardsville, Ills.
25A2t

Advertisements.

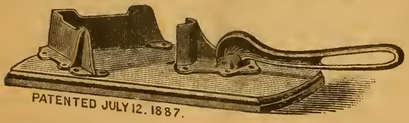
PETRIE IMPROVED AUTOMATIC SWARM - HIVER. Thoroughly tested and guaranteed to hive every swarm that passes through it. Sample mailed for 50c. **N. C. PETRIE, Cherry Valley, O.**
25A5t
Mention the American Bee Journal.

$2.75 per 1,000 for No. 1, one-piece Sections; No. 2, $1.50. Two-story dovetailed Hives, complete, $1.40 each. Plain Hives, in flat, 55 cents, as far as the lot will go.
25A3t **WM. HAASE, Bear Creek, Wis.**
Mention the American Bee Journal.

TEXAS ITALIAN QUEENS, from imported mother. Untested, $1; Tested, $1.50; Selected Tested, $2.50. Safe arrival guaranteed. Money orders payable in Richmond, Tex. B. F. STUART, Foster, Tex.
21A8t
Mention the American Bee Journal.

J. F. WOOD is now ready to ship those WARRANTED QUEENS, the same as gave such good satisfaction last season. See last week's BEE JOURNAL for price. Send for circular, telling how to be successful in introducing.
24Etf J. F. WOOD, North Prescott, Mass.
Mention the American Bee Journal.

SECTION PRESS.


PATENTED JULY 12. 1887.

WE are now prepared to furnish Wakeman & Crocker's **PRESS for putting together One-Piece Sections**—at wholesale and retail. Price, **$2.00,** by express. By the dozen—rate given upon application.

THOMAS G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

READ

What A. I. Root says about my

Five-Banded Golden Italian Bees:

"They are ABOUT THE YELLOWEST WE EVER SAW. For any who want fancy bees, these will be the bees." One Queen by mail, $1.00.
J. F. MICHAEL, German, Darke Co., O.
23A4t

Positively by Return Mail

AFTER June 20, we shall be prepared to ship our fine Golden Carniolan and Golden Italian Queens by return mail. Prices of Italian Queens:

Warranted.	Tested.	Select Tested.
1 Queen ..$1.25	1 Queen..$2.00	1 Queen ..$3.00
2 Queens.. 2.25	2 Queens. 3.75	2 Queens.. 5.50
6 Queens.. 6.50	6 Queens. 10.00	6 Queens .15.00
12 Queens .12.00	12 Queens. 18.00	12 Queens .25.00

Golden Carniolan Queens, each, $2.00.

If you would rather see these Queens befor paying for them, you can do so. Safe arrival and satisfaction promised in all cases.

HENRY ALLEY, Wenham, Mass.
25Atf
Mention the American Bee Journal.

Scientific Queen-Rearing

AS PRACTICALLY APPLIED;

Being a Method by which **the very best of Queen-Bees** are reared in perfect accord with Nature's Way; by

G. M. DOOLITTLE.

In this book the author details the results of his Experiments in Rearing Queen-Bees for the past four or five years, and is the first to present his discoveries to the World.

Bound in Cloth—176 pages—**Price, $1.00,** postpaid; or, it will be Clubbed with the American Bee Journal one year, for $1.75—with the Illustrated Home Journal, for $1.25; or the two Journals and the Book for $2.00.

THOMAS G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL

For Albino and Golden Italian Queens,

SEND TO

A. L. KILDOW, SHEFFIELD, ILL.

1 Untested Albino, $1.00; 6 for..........	$5.00
1 Tested Albino, June and July, $1.75; August and September..........	1.50
1 Select Tested Albino, Aug. and Sept....	2.50
1 Untested Italian, $1.00; July to Sept..	.75
1 Tested Italian, June and July, $1.50; August and September..................	1.25
1 Select Tested Italian, June, $2.50; after June	2.00

Send for Catalogue. 14Etf
Mention the American Bee Journal.

Send 50 Cents For my Book, entitled—"A Year Among the Bees," 114 pages, cloth bound. Address
DR. C. C. MILLER,
20Atf MARENGO, ILL.
Mention the American Bee Journal.

Advanced Bee-Culture;

ITS METHODS AND MANAGEMENT. I am now engaged in writing and printing a book that is to bear this title.

It is to take the place of my other book, **The Production of Comb-Honey,** which will not be republished. Although the new book will contain at least five or six times as much matter as **The Production of Comb-Honey,** yet the price will be only **50 cents.** The book is already partly printed, and will probably be out sometime in April or May. If any of the friends would like to "help me along" in meeting the expenses of getting out the book, they can do so by sending their orders in advance. Such orders will be most thankfully received, and filled the **very day** the book is out. I will send **The Review** one year and the book for $1.25. **The Review** will be sent on receipt of order (I have plenty of back numbers to send it from the beginning of the year) and the book as soon as it is out. Stamps taken, either United States or Canadian.

☞ SAMPLE OF THE REVIEW, FREE. **W. Z. HUTCHINSON, Flint, Mich.**
16Etf